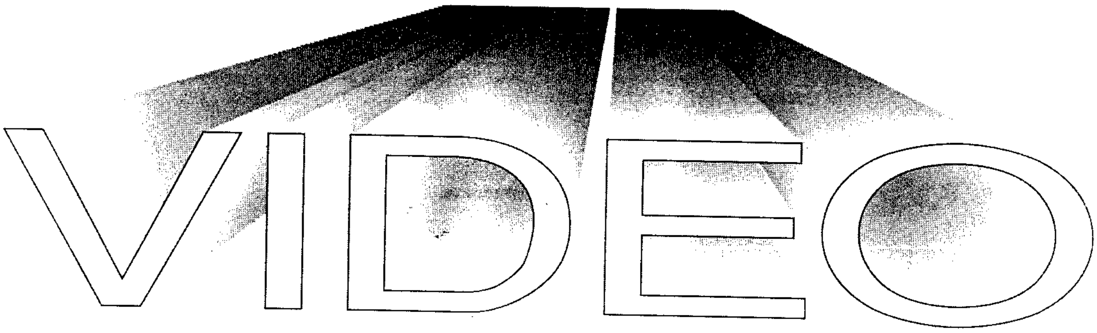
BLAUPUNKT
Bosch Telecom

Video Recorder
RTV-430 EGC
7 618 808

Kundendienstschrift · Service Manual

Ⓓ Btx ✶ 30 39 681 #

MC/VKD 1 D92 420 016



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ET-Liste zur Explo Nr. 1
Spare Parts List to Explo No. 1

Lfd. Nr. Item No.	Bestell-Nr. Part No.
1	8 619 417 519
5	8 619 510 148
6	8 619 530 624
7	8 619 530 625
8	8 619 530 281
10	8 619 419 505
11	8 619 414 205
12	8 619 414 631
13	8 619 414 206
14	8 619 510 351
15 0,5 mm	8 619 417 411
15 0,3 mm	8 619 417 412
15 0,2 mm	8 619 417 413
16	8 619 414 207
17	8 619 434 602
18	8 619 414 208
20	8 619 414 409
21	8 619 580 356
22	8 619 414 632
23	8 619 520 207
24	8 619 419 152
25	8 619 419 153
26	8 619 414 633
27	8 619 419 154
28	8 619 414 213
29	8 619 416 600
31	8 619 417 520
32	8 619 316 604
33	8 619 312 507
34	8 619 530 626
35	8 619 414 554
36	8 619 419 504
37	8 619 419 157
38	8 619 414 634
39	8 619 530 461
40	8 619 414 635
41	8 619 414 555
42	8 619 417 521
43	8 619 414 369
44	8 619 417 235
45	8 619 419 321
46	8 619 419 610
47	8 619 419 159
48	8 619 414 637
49	8 619 416 103
50	8 619 510 314
51	8 619 416 307
52	8 619 212 560
53	8 619 510 421
54	8 619 510 630
55	8 619 520 224
57	8 619 416 308
58	8 619 510 422
59	8 619 312 502
60	8 619 414 218
62	8 619 510 353
63	8 619 414 220
64	8 619 417 363
65	8 619 510 497
66	8 619 520 501
67	8 619 414 221
68	8 619 417 231
69	8 619 414 638
70	8 619 419 611
71	8 619 510 352
72	8 619 414 223
76	8 619 417 522
77	8 619 418 506
80	8 619 419 149
83	8 619 419 601
84	8 619 417 183
85	8 619 419 327
86	8 619 510 315
87	8 619 419 160
88	8 619 419 161
89	8 619 419 328
90	8 619 419 162
91	8 619 530 462
92	8 619 530 473
93	8 619 414 401
94	8 619 530 463
95	8 619 520 453
96	8 619 520 454
97	8 619 580 583

ET-Liste zur Explo Nr. 2
Spare Parts List to Explo No. 2

Lfd. Nr. Item No.	Bestell-Nr. Part No.
100	8 619 414 409
101	8 619 414 640
102	8 619 414 641
103	8 619 510 150
104	8 619 510 151
105	8 619 419 168
106	8 619 414 642
107	8 619 419 169
108	8 619 419 331
109	8 619 416 126
110	8 619 414 229
111	8 619 419 319
112	8 619 414 352
113	8 619 414 357
114	8 619 416 309
115	8 619 414 354
116	8 619 419 317
117	8 619 414 643
118	8 619 414 358
119	8 619 414 346
120	8 619 414 351
121	8 619 411 402
122	8 619 414 230
123	8 619 414 231
124	8 619 414 644
125	8 619 414 232
127	8 619 418 308
128	8 619 419 332
129	8 619 414 233
130	8 619 414 234
131	8 619 414 235
132	8 619 417 910
133	8 619 510 349
134	8 619 510 903
135	8 619 429 405
136	8 619 416 105
137	8 619 417 357
138	8 619 419 318
139	8 619 414 645
140	8 619 414 236
141	8 619 419 333
142	8 619 416 312
143	8 619 416 313
144	8 619 414 237
145	8 619 414 238
146	8 619 419 316
147	8 619 419 191
148	8 619 434 600
149	8 619 416 613
150	8 619 419 500
151	8 619 419 501

ET-Liste zur Explo Nr. 3
Spare Parts List to Explo No. 3

Lfd. Nr. Item No.	Bestell-Nr. Part No.
201	8 619 530 682
202	8 619 530 464
217	8 619 530 669
218	8 619 414 242
219	8 619 530 670
221	8 619 520 283
229	8 619 419 305
230	8 619 419 613
231	8 619 417 222
232	8 619 417 223
233	8 619 419 614
234	8 619 414 244
235	8 619 404 065
236	8 619 316 623
240	8 619 416 128
241	8 619 580 571
242	8 619 580 572

ET-Liste zur IR-Fernbedienung
Spare Parts List to IR remote controller

Batteriefachdeckel für IR-Fernbedienung
8 619 530 679
Sensorkappe für IR-Fernbedienung
8 619 530 678
Klappe für IR-Fernbedienung
8 619 530 676
Für die Fernbedienung sind keine
weiteren Ersatzteile lieferbar

Battery cover for IR-remote controller
8 619 530 679
Sensor cap for IR-remote controller
8 619 530 678
Flap for IR-remote controller
8 619 530 676
Further spare parts for remote
controller are not available

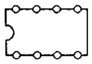
ET-Liste zur Explo Nr. 4
Spare Parts List to Explo No. 4

Lfd. Nr. Item No.	Bestell-Nr. Part No.
300	8 619 530 680
301	8 619 414 556
302	8 619 580 357
303	8 619 580 358
304	8 619 312 249
306	8 619 580 359
310	8 619 417 224
322	8 619 510 855
323	8 619 510 980

Werkstatt-Hilfsmittel
Jigs and Tools

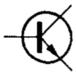
Y 1	Sicherungsring	8 619 498 001
Y 2	Cass.-Laufwerk	8 619 498 002
Y 3	Post Adjustment	8 619 497 806
Y 4	Reel Tab.	8 619 497 807
Y 5	H-Position Adjustment	8 619 498 003
Y 6	Post Adjustment	8 619 498 004
Y 7	Videoband	8 619 498 005
Y 8	Hexagonal Wrench	8 619 497 811
Y 9	Videotape Adjustment	8 619 498 006
Y 10	Videotape Adjustment	8 619 498 007
Y 11	Upper Cylinder Remove	8 619 498 008

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
	Wichtige mechanische Bauteile **Important mechanical Parts**	
1	Kopftrommel DD cylinder unit	8 619 530 624
2	Kopfscheibe Upper cylinder unit	8 619 530 625
3	Capstan Rotor Capstan rotor unit	8 619 510 349
4	Capstan Stator Capstan stator unit	8 619 429 405
5	Tuner Tuner	8 619 530 422
6	Netzkabel Power cable	8 619 580 554
7	Antennenkabel RF cable	8 619 580 592
8	AV-Kabel AV cable	7 618 564 700
9	IR-Fernbedienung IR remote control unit	8 619 590 846
10	Programmiertabelle Programming sheet	8 619 590 010

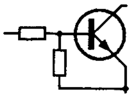
Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
	Hauptplatine **Main C.B.A.**	
1	Folienleiterbahn Flexible C.B. (P1001 - P1101)	8 619 580 576
2	Folienleiterbahn Flexible C.B. (P2002 - P006)	8 619 580 578
3	Folienleiterbahn Flexible C.B. (P3001 - P501)	8 619 580 574
4	Folienleiterbahn Flexible C.B. (P6001 - P1504)	8 619 580 579
5	Folienleiterbahn Flexible C.B. (P2001 - P201)	8 619 580 580
6	Folienleiterbahn Flexible C.B. (P7402 - P7502)	8 619 580 010
7	Folienleiterbahn Flexible C.B. (P7401 - P7501)	8 619 580 594
C 7402	47 mF 5,5 V	8 942 999 006
D 1001	1SS 254	8 945 405 979
D 1002	1 SS 254	8 945 405 979
D 2001	1 SS 254	8 945 405 979
D 2005	1 SS 254	8 945 405 979
D 2099	MA 723 VT	8 925 405 557
D 2303	1 SS 254	8 945 405 979
D 2304	1 SS 254	8 945 405 979
D 3001	1 SS 254	8 945 405 979
D 4003	1 SS 254	8 945 405 979
D 4004	1 SS 254	8 945 405 979
D 6005	1 SS 254	8 945 405 979
D 6007	1 SS 254	8 945 405 979
D 6601	1 SS 254	8 945 405 979
D 6602	1 SS 254	8 945 405 979
D 6603	1 SS 254	8 945 405 979
D 6604	1 SS 254	8 945 405 979
D 6605	1 SS 254	8 945 405 979
D 6606	1 SS 254	8 945 405 979
D 6607	11 ES 1	8 945 405 679
D 6608	ERA 15-01	8 945 405 527
D 6610	1 SS 254	8 945 405 979
D 7401	MA 723 VT	8 925 405 557
F 1101	1,6 AT 250 V	8 619 487 004
		
IC 2201	XRA 6435 S	8 925 900 547
IC 2301	UPD 358 G 2	8 945 900 886
IC 4001	XRA 7766 AS	8 925 900 548
IC 6001	MN 6743 VRDD	8 925 900 843
IC 6002	UPD 358 G 2	8 945 900 886

Ersatzteilliste

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
IC 6101	PST 591 B	8 945 903 482
IC 6601	SI-3090 CA	8 945 903 334



Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
Q 3001	MSB 709 * 2 SB 709	8 945 706 104
Q 3201	MSC 2295 * 2 SC 2295	8 945 706 107
Q 3203	MSD 601 * 2 SD 601	8 945 706 108
Q 3204	2 SB 970 (R)	8 925 705 084
Q 4001	MSD 602	8 925 705 158
Q 6202	2 SB 710	8 925 705 116
Q 6203	2 SB 1321 (R)	8 945 705 695
Q 6603	2 SD 1994 (S)	8 945 706 015
Q 6604	2 SD 1994 (S)	8 945 706 015
Q 6605	2 SD 1994 (S)	8 945 706 015
Q 6606	MSD 602	8 925 705 158
Q 6607	MSD 601 * 2 SD 601	8 945 706 108



Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
QR 1001	MRN 1402	8 945 706 092
QR 2001	MRN 1404	8 945 706 094
QR 2006	MRN 1404	8 945 706 094
QR 3001	MRN 2402	8 945 706 090
QR 3007	MRN 1403	8 945 706 093
QR 4001	MRN 1404	8 945 706 094
QR 4102	MRN 1404	8 945 706 094
QR 4103	MRN 1402	8 945 706 092
QR 6202	MRN 1404	8 945 706 094
QR 6601	UN 211 H	8 945 706 178
QR 6602	MRN 2404	8 945 706 091
QR 6603	MRN 1403	8 945 706 093
QR 6604	MRN 1403	8 945 706 093
QR 6605	MRN 1403	8 945 706 093
QR 6606	MRN 2404	8 945 706 091
QR 6607	UN 2119	8 945 705 677
QR 7401	MRN 1402	8 945 706 092

Position Position	Bezeichnung Designation		Bestell-Nr. Part no.
R 6609	22 Ω	3 W	8 940 599 364
R 6612	22 Ω	2 W	8 940 599 263

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
T 4001	27 µH	8 619 436 201

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
VR 2001	50 kΩ	8 941 599 779
VR 3012	500 Ω	8 941 599 781
VR 4002	200 kΩ	8 941 599 782

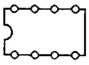
Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
X 6501		8 946 193 407
X 7401		8 946 193 178

Spare Part List

Eingangs-/Ausgangsplatine
Input/Output C.B.A.

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
1	Buchsenabdeckung Socket cover	8 619 419 192

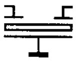
Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
D 3901	1 SS 254	8 945 405 979
D 3902	1 SS 254	8 945 405 979



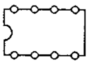
Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
IC 3901	LA 7150	8 945 902 704

Luminanz- und Farbteilplatine
Luminance and Chrominance C.B.A.

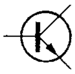
Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
D 801	1 SS 254	8 945 405 979
D 802	1 SS 254	8 945 405 979



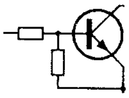
Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
DL 802		8 619 580 301



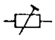
Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
IC 301	MSM 7403 MS	8 945 903 470
IC 302	VEFH 14 D	8 945 903 146



Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
Q 301	MSC 2295 * 2 SC 2295	8 945 706 107
Q 302	MSB 709 * 2 SB 709	8 945 706 104
Q 801	MSD 601 * 2 SD 601	8 945 706 108
Q 804	MSD 601 * 2 SD 601	8 945 706 108



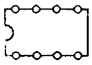
Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
QR 803	MRN 1404	8 945 706 094
QR 807	MRN 1403	8 945 706 093



Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
VR 301	1 kΩ	8 921 500 240

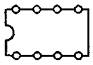
Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
X 801		8 946 193 116

Kopftrommel-Treiberplatine
Cylinder Drive C.B.A.

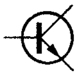


Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
IC 201	NA 3814 K	8 945 903 326

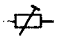
Kopfverstärker-Platine
Head Amp C.B.A.



Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
IC 501	BA 7274 S	8 945 902 706



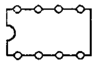
Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
Q 502	MSB 709 * 2 SB 709	8 945 706 104
Q 503	MSC 2295 * 2 SC 2295	8 945 706 107



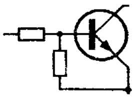
Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
VR 501		8 941 599 828
VR 502		8 941 599 829

VPS Platine
VPS C.B.A.

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
D 7851	1SS 254	8 945 405 979



Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
IC 7801	SAA 4700	8 945 902 448
IC 7851	MN 158413 VSSY	8 945 903 013



Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
QR 7851	UN 6211	8 925 705 459
QR 7852	UN 6213	8 925 705 460

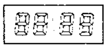
Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
X 7851		8 946 193 277

Timerplatine
Timer C.B.A.

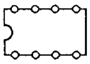
Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
1	IR-Empfänger IR-Receiver	8 619 590 014
2	Halter Holder	8 619 530 466
3	LED-Halter LED holder	8 619 530 467
4	Schalterknopf Switch button	8 619 530 681

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
C 7501	30 pf	8 943 995 042

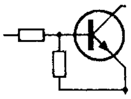
Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
D 7501	MA 4220 H	8 925 405 571
D 7502	MA 221	8 945 405 633
D 7508	MA 221	8 945 405 633
D 7516	MA 221	8 945 405 633
D 7518	MA 221	8 945 405 633
D 7521	MA 221	8 945 405 633
D 7522	MA 221	8 945 405 633
D 7528	MA 221	8 945 405 633
D 7539	MA 221	8 945 405 633
D 7540	MA 221	8 945 405 633
D 7544	MA 221	8 945 405 633
D 7545	MA 221	8 945 405 633
D 7546	MA 221	8 945 405 633
D 7547	MA 221	8 945 405 633
D 7555	LN 38 GCPLV	8 945 406 184
D 7568	MA 221	8 945 405 633



Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
DP 7501		8 619 580 524



Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
IC 7501	MN 187164 VS	8 945 903 331
IC 7502	M 6 M 80021 P	8 945 903 332
IC 7503	MN 1280 L	8 945 901 543
IC 7504	MN 1280 S	8 945 902 705
IC 7505	M 66006 FP	8 925 900 842



Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
QR 7501	MRN 1404	8 945 706 094
QR 7502	MRN 2404	8 945 706 091
QR 7503	UN 2216	8 945 705 930

Ersatzteilliste

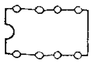
Spare Part List

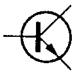
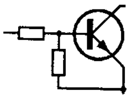
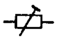
Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
SW 7501		8 619 520 290
SW 7505		8 619 520 211
SW 7506		8 619 520 211
SW 7507		8 619 520 211
SW 7508		8 619 520 211
SW 7511		8 619 520 211
SW 7513		8 619 520 211
SW 7515		8 619 520 211
SW 7516		8 619 520 211
SW 7517		8 619 520 211
SW 7518		8 619 520 211
SW 7519		8 619 520 211
SW 7520		8 619 520 211
SW 7521		8 619 520 211
SW 7522		8 619 520 211
SW 7523		8 619 520 211
SW 7524		8 619 520 211
SW 7525		8 619 520 211
SW 7526		8 619 520 211
SW 7532		8 619 520 211
SW 7533		8 619 520 211
X 7501		8 946 193 175
X 7502		8 906 193 053

Bedienteilplatine Operation C.B.A.

D 4351	LN 28 RPX 2 TA 12	8 945 406 294
SW 4351		8 619 520 211

Demodulatorplatine TV Demodulator C.B.A.

D 710	MA 3100 L	8 945 405 724
D 771	MA 151 WK	8 945 405 317
D 772	1 SS 254	8 945 405 979
D 773	MA 151 K	8 945 405 226
D 7601	MA 151 A	8 945 405 225
D 7602	MA 3082 M	8 945 405 635
		
IC 701	M 51366 SP	8 945 901 286
IC 7651	AN 5421 N	8 945 902 135
IC 7652	AN 5043	8 945 901 989

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
IC 7653	MN 4066 BS	8 945 901 068
		
Q 703	2 SD 601-S * MSD 601-S	8 925 705 436
Q 712	2 SD 638	8 905 705 606
Q 713	2 SD 1328-S	8 925 705 435
Q 771	2 SD 601-S * MSD 601-S	8 925 705 436
Q 772	2 SD 601-S * MSD 601-S	8 925 705 436
		
QR 701	MRN 1404	8 945 706 094
QR 702	MRN 1404	8 945 706 094
QR 711	MRN 1403	8 945 706 093
QR 712	MRN 1403	8 945 706 093
QR 713	MRN 1402	8 945 706 092
QR 714	MRN 1402	8 945 706 092
QR 7601	MRN 1404	8 945 706 094
T 703		8 619 435 204
T 704		8 619 439 200
T 711		8 619 435 205
		
VR 701	2 kΩ	8 941 599 777
VR 702	2 kΩ	8 941 599 777
VR 741	10 kΩ	8 941 599 531
VR 751	5 kΩ	8 941 599 784
VR 7660	2 kΩ	8 901 499 102
X 710		8 946 193 404
X 711		8 946 193 134
X 712		8 946 193 134
X 716		8 946 193 156
X 717		8 946 193 156

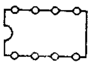
Netzteilplatine Power C.B.A.

C 1101	470 pF 400 V	8 942 247 213
C 1106	470 pF 400 V	8 942 247 213
C 1107	0,15 µF 250 V	8 942 899 296
C 1108	0,1 µF 250 V	8 942 210 511
C 1109	82 µF 400 V	8 943 499 288
C 1114	1000 pF 250 V	8 942 899 166

Ersatzteilliste

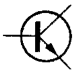
Position Position	Bezeichnung Designation	Bestell-Nr. Part no.

D 1101	S1 WBA 60 S	8 945 405 846
D 1102	1 SS 254	8 945 405 979
D 1103	VSD 0002	8 945 405 741
D 1104	AP 01C	8 945 405 930
D 1105	1 SS 254	8 945 405 979
D 1106	MA 178	8 945 405 619
D 1107	MA 178	8 945 405 619
D 1108	MA 4024 H	8 945 421 481
D 1109	AU 01 Z	8 945 406 372
D 1110	RL 2 ZP	8 945 406 036
D 1111	MA 185	8 945 405 620
D 1112	11 EQS 04	8 945 405 791
D 1113	11 EQS 04	8 945 405 791
D 1114	MA 178	8 945 405 619
D 1115	MA 178	8 945 405 619
D 1117	MA 2200 B	8 945 405 740
D 1118	1 SS 254	8 945 405 979



IC 1101	UPC 1093 J	8 945 903 431

L 1101		8 619 437 033
L 1102		8 619 439 048
L 1103		8 619 439 048
L 1104		8 619 439 048
L 1105		8 619 439 048
L 1107		8 619 437 010
L 1108		8 619 530 072
L 1109		8 619 530 072
L 1110	100 µH	8 948 411 515



Q 1101	2 SC 4300	8 945 706 195
Q 1102	2 SD 1458	8 945 705 277
Q 1103	PS 2561 L1-1 WL	8 945 903 483
Q 1105	2 SD 1991 (R)	8 945 705 692
Q 1106	2 SD 2375	8 945 706 196
Q 1108	2 SD 1458	8 945 705 277
Q 1109	2 SD 1996	8 925 705 469

R 1101	330 kΩ 0.5 W	8 940 599 619
R 1103	68 Ω 2 W	8 940 599 777
R 1104	0,68 Ω 1 W	8 940 599 778
R 1106	2.2 Ω 2 W	8 940 599 567
R 1107	68 kΩ 3 W	8 940 599 368

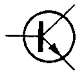
F 1101		8 619 580 011

Spare Parts List

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.

Abwickel-Tr.-Platine Photo Tr. (S) C.B.A.

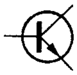
1	Tr.-Halter Photo Tr. Holder	8 619 316 198



Q 1501	PN 150 NVS	8 945 706 140

Aufwickel-Tr.-Platine Photo Tr. (T) C.B.A.

1	Tr.-Halter Photo Tr. Holder	8 619 316 198



Q 1502	PN 150NVS	8 945 706 140

Laufwerk-Verbindungsplatine Mechanism Connection C.B.A.

1	Halter Holder	8 619 419 149
2	Halter Holder	8 619 414 204

D 1	GL 450	8 905 406 167
D 2	ON 2170 LF	8 945 902 205

Hinweis:
Handelsübliche Kondensatoren und Widerstände sind in der Ersatzteilliste nicht aufgeführt. Wir bitten Sie, diese Teile im Fachhandel zu beziehen.

Note:
Capacitors and resistors usual in trade are not mentioned in the spare parts list. Kindly buy these parts from the specialized trade.

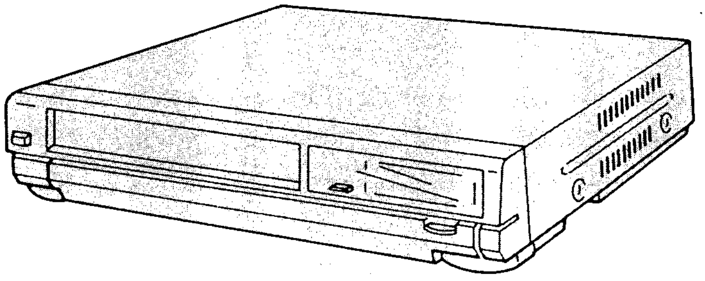
ORDER NO. VRD9204M112

Service Manual

General Description
Adjustment Procedures
Block/Schematic Diagrams
Exploded Views/Parts List

Video Cassette Recorder
Panasonic VHS HQ
PAL

NV-J37EG



SPECIFICATIONS

ITEM	SPECIFICATION
POWER	SOURCE: 220~240 V AC 50/60 Hz
	CONSUMPTION: 22 watts
RECORDING SYSTEM	2 rotary heads, helical scanning system
	PAL
TV TUNER SYSTEM	VHF I: CHE2~CHE4 VHF III: CHS4~CHE12 VHF H: CHS11~CHS20 (PAL/SECAM B) 75Ω unbalanced UHF: CH21~CH69 (PAL/SECAM G) 75Ω unbalanced
RF OUT SYSTEM	UHF: CH36±4 (PAL G) 70^{+3}_{-3} dBμ, 75Ω unbalanced
VIDEO	HEADS: 3 rotary heads 1 pair for recording and playback (L-R heads) 1 pc. for trick play (L' head)
	INPUT: EURO AV Connector (21 pin) 1.0 Vp-p, 75Ω terminated
	OUTPUT: EURO AV Connector (21 pin) 1.0 Vp-p, 75Ω terminated

ITEM	SPECIFICATION
AUDIO	HEADS: 1 Stationary head (Normal Audio)
	INPUT: EURO AV Connector (21 pin) More than −6 dBV (500 mV), 10 kΩ
	OUTPUT: EURO AV Connector (21 pin) −6 dBV (500 mV), Less than 1 kΩ
TAPE FORMAT	VHS Cassette tape (Tape width 12.7 mm)
TAPE SPEED	23.39 mm/s Record/Playback Time: 4 hours with 240 min. type tape FF/REW Time: 2.5 min. with 180 min. type tape
DIMENSIONS	380 (W)×82 (H)×344.5 (D) mm
WEIGHT	5.1 kg
STANDARD ACCESSORIES	1 pc. DIN-RF Cable 1 pc. Programme Sheet 1 pc. AC Mains Lead 1 pc. Infra-red Remote Controller (Build in Digital Scanner) 1 pc. 21-pin Cable (Euro AV)

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

Panasonic

INTRODUCTION

This service manual contains technical information which will allow service personnels to understand and service this model.

Section 1 presents you with some general information of features and controls, enabling you to become familiar with each function.

Section 2 contributes to your mechanical and electrical adjustment as well disassembly and replacement procedures.

In the case of very common information relating to other models like mechanical adjustments, please refer to each service manual.

Section 3 contains block diagrams which offers you information for checking and understanding each circuit. Schematic diagrams which give you detailed information such as waveforms, voltage data, function e.t.c...

Section 4 contains exploded views and parts list.

Please place orders using the parts list and not the drawing reference numbers.

If the circuit is changed or modified, this information will be followed by supplementary service manual to be filed with original service manual.

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SERVICE INFORMATION

1-1. HOW TO CHECK THE CRACKED CHIP PART

(1) Apply heat to the soldered portions of chip part using a soldering iron for about 2–3 seconds.
(2) If the chip part is faulty,it will be broken or cracked.

Caution: Do not leave soldering iron on the PCB too long as damage may occur to the PCB or the chip parts.

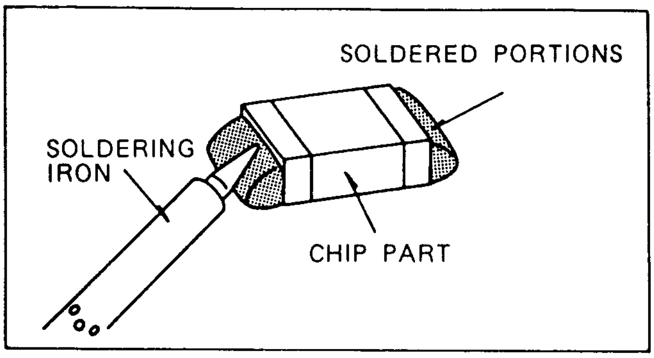

SOLDERED PORTIONS
SOLDERING IRON
CHIP PART

FIG. G1

Note: Regarding intermittent faults
The main causes of these faults are poor soldering and cracked chip parts.

1-2. HOW TO REPLACE THE CHIP PART

1) REMOVAL (RESISTOR, CAPACITOR, etc...)

(1) Presolder the one side of soldering portion for chip part and grasp the chip part by tweezers.

(2) Melt the presoldered portion. And then remove the chip part with a twisting motion while melting the soldering portion of another side quickly.

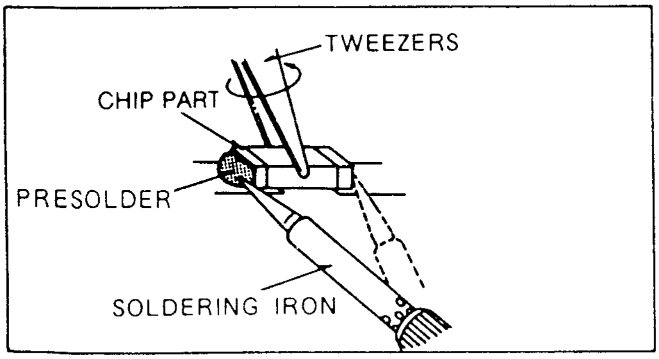

TWEEZERS
CHIP PART
PRESOLDER
SOLDERING IRON

FIG. G2

2) REMOVAL (transistor, diode, etc...)

(1) Grasp the chip part with tweezers and melt the solder of one lead.

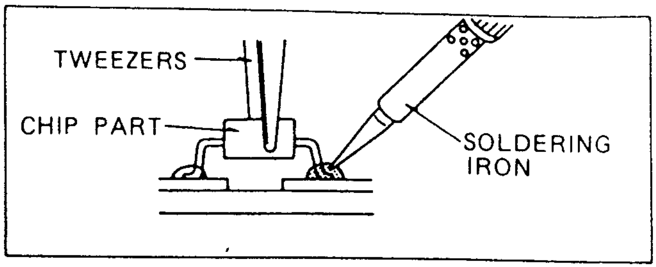

TWEEZERS
CHIP PART
SOLDERING IRON

FIG. G3

(2) Lift the side of that lead upward.

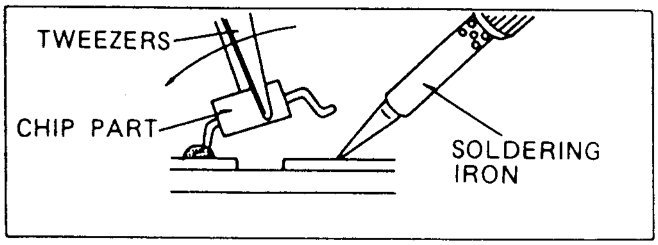

TWEEZERS
CHIP PART
SOLDERING IRON

FIG. G4

Caution: Do not lift the chip part too high as damage may occur to the PCB or the leads that are still soldered on the PCB.

(3) Simultaneously heat the solder of the two remaining leads and lift part to remove.

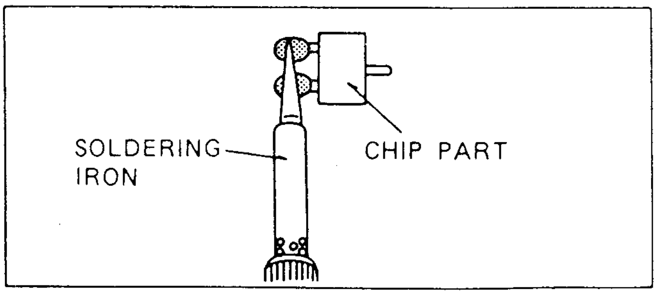

SOLDERING IRON
CHIP PART

FIG. G5

3) INSTALLATION

(1) Presolder the one side of contact point on the circuit board.

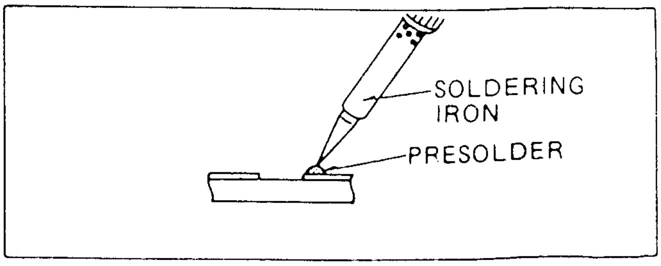

SOLDERING IRON
PRESOLDER

FIG. G6

(2) To install the chip part,hold in position using tweezers, apply heat to the pre-soldered portions using a fine tip soldering iron.
(3) Solder the other side of the chip part.
(4) Check your soldering.

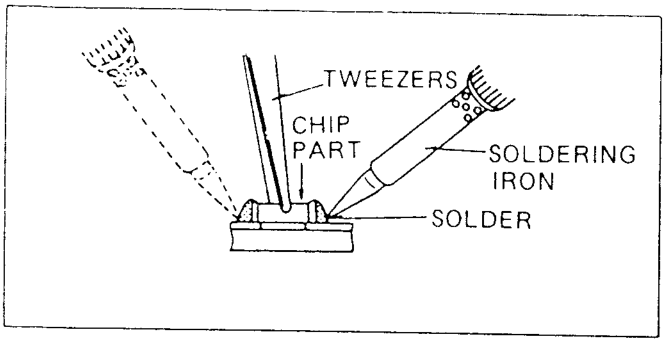

TWEEZERS
CHIP PART
SOLDERING IRON
SOLDER

FIG. G7

1-3. HOW TO REMOVE THE FLAT-IC

(WITH HOT-AIR FLAT-IC DESOLDERING MACHINE)

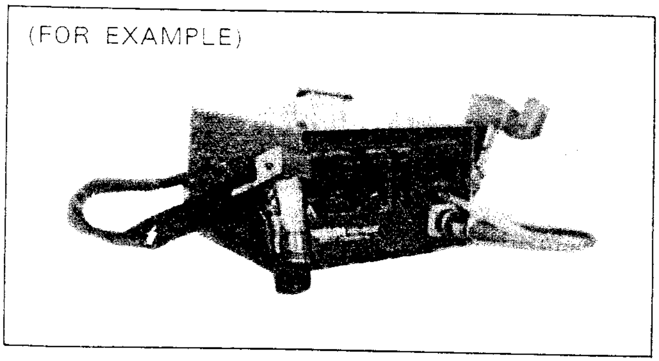

(FOR EXAMPLE)

FIG. G8

(1) Prepare the HOT-AIR FLAT-IC DESOLDERING MACHINE. And then apply hot air to FLAT-IC about 5 ~ 8 seconds.

(2) Remove the FLAT-IC with tweezers while applying the hot air.

Caution: Do not supply the hot air to the chip parts around the Flat-IC for long time as as damage may occur to the chip parts around the Flat -IC. ,

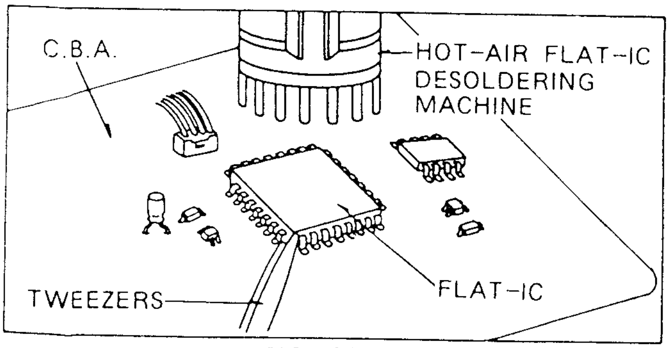

C.B.A.
HOT-AIR FLAT-IC DESOLDERING MACHINE
TWEEZERS
FLAT-IC

FIG. G9

(WITH SOLDERING IRON)

(1) Using solder braid remove the solder from all pins of the Flat-IC.
When you use the solder flux which is applied to all pins of the Flat-IC,you can remove it easily.

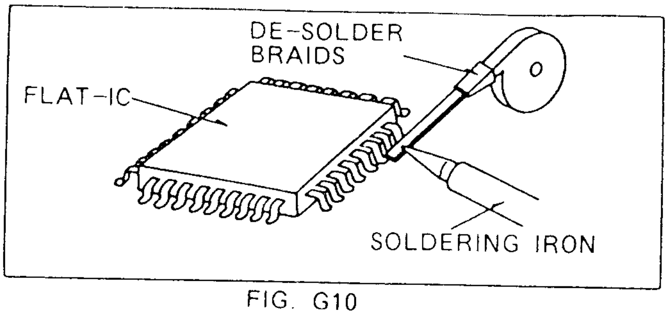

DE-SOLDER BRAIDS
FLAT-IC
SOLDERING IRON

FIG. G10

(2) Lift each lead of the Flat-IC upward one by one using a sharp pin or non solder wire(iron wire),while heating the pins using a fine tip soldering iron or a hot air blower.

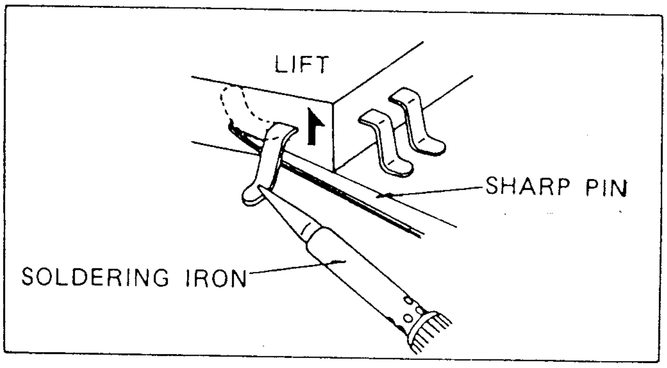

LIFT
SHARP PIN
SOLDERING IRON

FIG. G11

(WITH IRON WIRE)

(1) Affix the wire to workbench or solid mounting point as shown in FIG.G12.
(2) Pull up wire as the solder melts so as to lift the IC lead from the PCB contact pad,while heating the pins using a fine tip soldering iron or hot air blower.

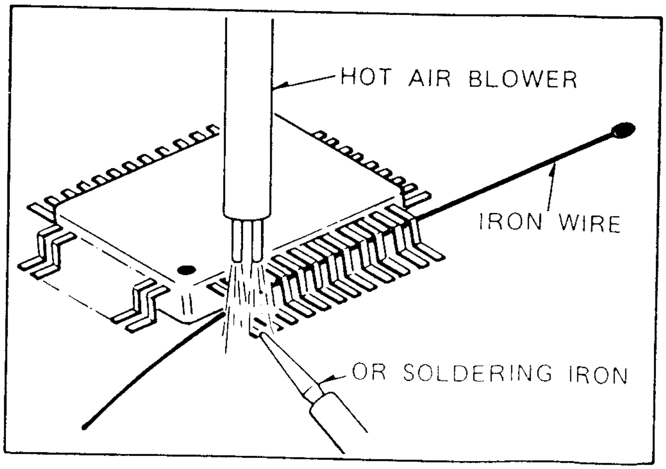

HOT AIR BLOWER
IRON WIRE
OR SOLDERING IRON

FIG.G12

Note: When using a soldering iron care must be taken to ensure that the Flat IC is not being held by glue before it is the PCB may be damaged if force is used.

SECTION 1
GENERAL DESCRIPTIONS

1-1. FEATURES

1. High–Response Mechanism. (G1–Revised)
   In order to achieve the quick operation. Dual–mode Loading Stop System is introduced on this G1–Revised Mechanism as G2 mechanism. (Microprocessor is also changed comparing with G1.) Response times are slightly increased as following table Fig.F1.

CHASSIS No.	G1	G1–REV.	G2
Scene access time from Cassette–IN (Sec.)	10	5.8	5.7
Scene access time from STOP 1 (Half–loading stop) (Sec.)	5.7	3.9	3.6
Scene access time from STOP 2 (Full–loading stop) (Sec.)	–––	0.8	0.8
Scene access time from FF/REW (Sec.)	(F)7.6/(R)7.2	(F)4.6/(R)4.3	4.5
Mode switch time from PLAY to REVIEW (Sec.)	2.5	2.1	0.5
Mode switch time from PLAY to FF/REW (Sec.)	(F)9.2/(R)7.0	(F)8.2/(R)5.2	4.6
Mode switch time from STOP 1 to FF/REW (Sec.)	(F)3.3/(R)4.1	(F)3.3/(R)4.1	0.5
Mode switch time from PLAY to EJECT (Sec.)	8.8	5.9	6.3
CUE/REV SPEED (SP mode)	X7	X9	X9

Fig. F1 Mechanism Response Time
(Indicated times are approximately)

2. Auto· Operation.
   Four convenient automatic playback operations can be activated simply by pressing a single button on the remotecontroller.
   1. Repeat Playback
   2. Memory Playback
   3. Sleep Playback
   4. Rewind Playback

   Moreover, another auto operation can be activated automatically.

   Auto Operation
   Auto VTR On
   When a cassette is inserted, the VTR turns itself on automatically.

   Auto Play
   When inserting a video cassette which has the erasure prevention tab removed playback will start automatically.

   Auto Rewind
   When the tape reaches its end during recording (except OTR and timer recording) or playback, it will automatically be rewound to the beginning.

   VTR–Off Eject
   When the VTR is off, the inserted cassette can be ejected simply by pressing the Eject Button, and VTR will automatically turn itself off again.

3. Another Functions.

   1. VHS Index Search System
   2. Intro Scan Function
   3. Time Search Function.

1-2. TECHNICAL INFORMATION

INITIALIZATION OF CHANNEL MEMORY IC (IC7502/M6M80021P)

When replace the channel memory IC (IC7502/M6M80021P), the memory IC should be initialized to keep formal specification.

Note:

1) It should be performed before tuner preset.
2) During initialization or after initialization within 1 second, do not stop the power source. (Do not disconnect AC cord.)
3) Meaning of "INITIALIZATION" is to erase the "SKIP CH". In another to say the number of POSITION CH and DISPLAY CH to be same.

Method:

1). Press the CH UP/DOWN Button so that the Channel indicator indicates "– –".
2). Cnnect the Diode (MA165) to Pin 54 of IC7501 for Anode, Pin 35 of IC7501 for Cathode twice.
3). Channel indication disappears, and approximately 3 seconds later channel indicator indicates "1".

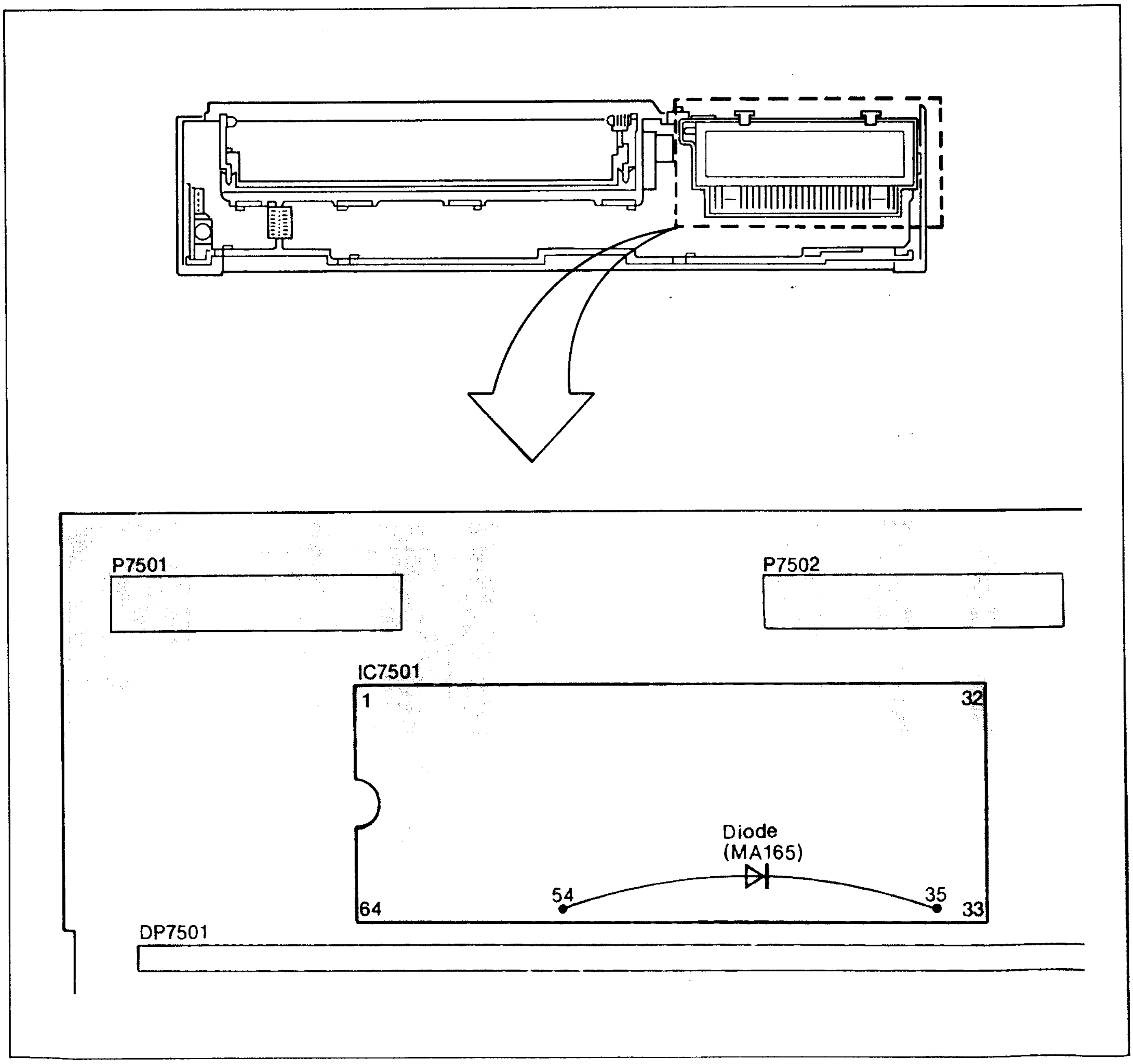


Fig. T1

SERVICE INFORMATION DISPLAY

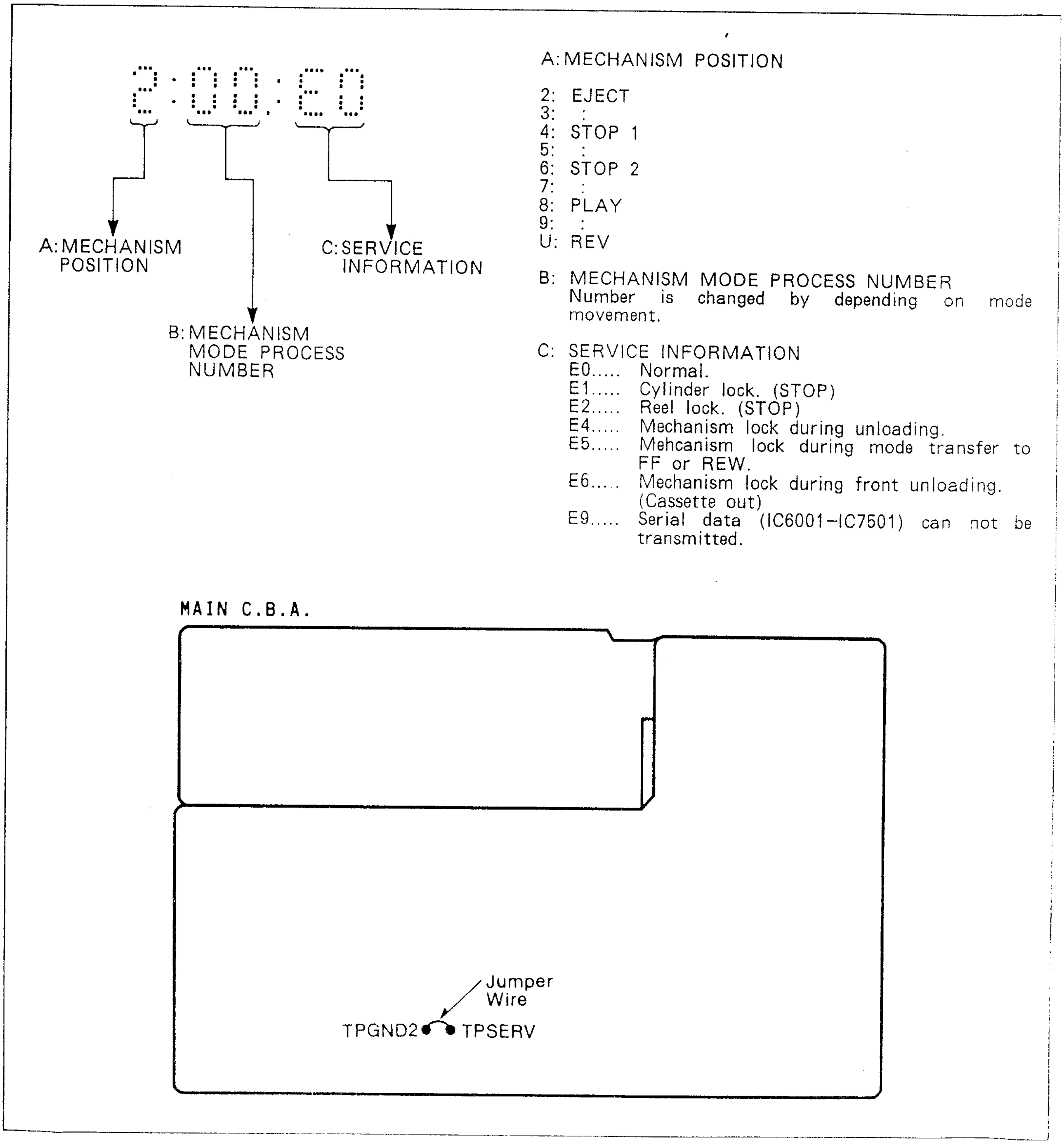
This unit can display the service information via multi function display.The information whitch is detected by microprocessor IC6001 can be confirmed by performing following method.

Method:

1) Press "EJECT", "FF" and "REW" keys at the same time.
2) The counter of multi function display indicates microprocessor data approximately 20 seconds as shown in Fig.T2.

NOTE:

1) This mode can be entered even when Power is off.
2) The data also can be displayed by connecting jumper wire between TPSERV and TPGND2.



2:00:E0
A:MECHANISM POSITION
B:MECHANISM MODE PROCESS NUMBER
C:SERVICE INFORMATION
MAIN C.B.A.
Jumper Wire
TPGND2
TPSERV

A:MECHANISM POSITION

2: EJECT
3: :
4: STOP 1
5: :
6: STOP 2
7: :
8: PLAY
9: :
U: REV

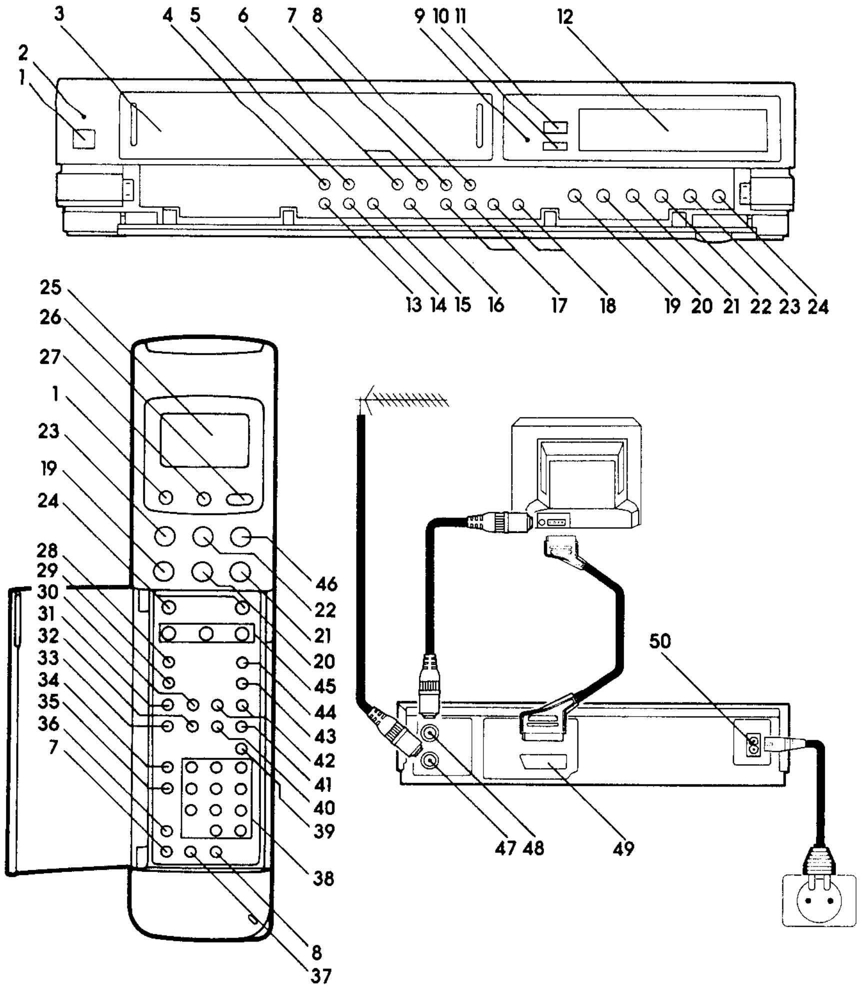
B: MECHANISM MODE PROCESS NUMBER
Number is changed by depending on mode movement.

C: SERVICE INFORMATION

E0.....	Normal.
E1.....	Cylinder lock. (STOP)
E2.....	Reel lock. (STOP)
E4.....	Mechanism lock during unloading.
E5.....	Mehcanism lock during mode transfer to FF or REW.
E6.....	Mechanism lock during front unloading. (Cassette out)
E9.....	Serial data (IC6001–IC7501) can not be transmitted.

Fig. T2

1-3. Anschlüsse/Gebrauch der Fernbedienung/Einstellung des Tuners im Videorecorder



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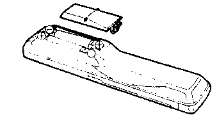

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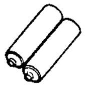

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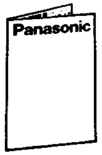

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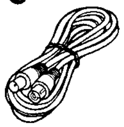

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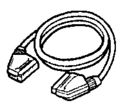

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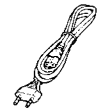


Anschlüsse

1 Verbinden Sie das Anschlußkabel der externen Fernsehantenne mit der Buchse **RF IN** (47) des Videorecorders.
2 Verbinden Sie den Antennenanschluß (⅂⌈) des Fernsehgerätes über das mitgelieferte HF-Kabel ❹ mit der Buchse **RF OUT** (48) des Videorecorders.
3 Verbinden Sie die Buchse **EURO AV** (49) des Videorecorders über das mitgelieferte Scart-Kabel ❺ mit dem Euro-AV-Anschluß am Fernsehgerät.
4 Verbinden Sie den Netzeingang **AC IN** (50) am Videorecorder über das mitgelieferte Netzkabel ❻ mit einer Netzsteckdose.

Gebrauch der Fernbedienung

Legen Sie Batterien ❶ in die Fernbedienung ein.

Achten Sie beim Gebrauch darauf, die Fernbedienung direkt auf das Empfangsfenster (11) am Videorecorder zu richten.

- Die Fernbedienung wird über zwei Batterien ❷ vom Typ UM3 (IEC-Kennung R6) mit Spannung versorgt. Die Lebensdauer dieser Batterien beträgt etwa ein Jahr, doch hängt dies von der Häufigkeit ab, mit der die Fernbedienung benutzt wird. Überprüfen Sie die Batterien einmal im Jahr und wechseln Sie sie ggf. aus.
- Der Lichtaufnahmewinkel des Empfangsfensters (11) am Videorecorder beträgt jeweils etwa 30° links und rechts von der Mittelachse.

Einstellung des Tuners im Videorecorder

Bis zu 99 Fernsehsender können voreingestellt werden.

Drücken Sie die **VTR**-Taste (1), um den Videorecorder einzuschalten. Die entsprechende Anzeige (2) leuchtet auf.

1 Drücken Sie die Taste **PRESET/FINE/NORMAL** (13) zur Wahl der Betriebsart.
2 Betätigen Sie die Programmwahltasten „∨“ und „∧“ (17) oder die Ziffertasten (38) zur Wahl des Programmplatzes, der mit einem Sender belegt werden soll.
3 Drücken Sie die **AFC/VPS**-Taste (14) zur Wahl einer der Positionen „I“, „III“ oder „U“.
4 Betätigen Sie die **TRACKING/V-LOCK**-Taste „+“ oder „−“ (6), um den gewünschten Sender abzustimmen und zu speichern.
5 Drücken Sie die **PROG/CHECK**-Taste (5) zur Wahl des PAL- oder MESECAM-Fernsehsystems.
1 zur Wahl von PAL
2 zur Wahl von MESECAM
Die **MESECAM**-Anzeige (9) leuchtet auf.

Wiederholen Sie Schritt 2 bis 4 für jeden einzelnen Programmplatz, der auf einen Sender abgestimmt werden soll.

6 Drücken Sie nach beendeter Einspeicherung aller gewünschten Sender die **PRESET/FINE/NORMAL**-Taste (13) zweimal.

Sperren unbelegter Programmplätze

Drücken Sie die **CLEAR**-Taste (15) in Schritt 3.

—Um die Sperrung eines Programmplatzes rückgängig zu machen, drücken Sie die **CLEAR**-Taste (15) erneut.

Drücken Sie abschließend die **PRESET/FINE/NORMAL**-Taste (13) zweimal.

Aufheben der Sperrung eines unbelegten Programmplatzes

1 Drücken Sie die **PRESET/FINE/NORMAL**-Taste (13).
2 Um die Sperrung eines Programmplatzes rückgängig zu machen, wählen Sie zunächst den betreffenden Programmplatz am Videorecorder und drücken dann die **CLEAR**-Taste (15).
3 Drücken Sie abschließend die **PRESET/FINE/NORMAL**-Taste (13) zweimal.

Feinabstimmung

Drücken Sie die **PRESET/FINE/NORMAL**-Taste (13) zweimal und betätigen Sie die **TRACKING/V-LOCK**-Taste „+“ oder „−“ (6), bis der Sender optimal abgestimmt ist.

—Drücken Sie die **AFC/VPS**-Taste (14), um auf den ursprünglichen Zustand der Abstimmung zurückzukehren.

Drücken Sie abschließend die **PRESET/FINE/NORMAL**-Taste (13) zweimal.

1-4. Einstellung der Uhr/Automatischer Betrieb/Wiedergabe

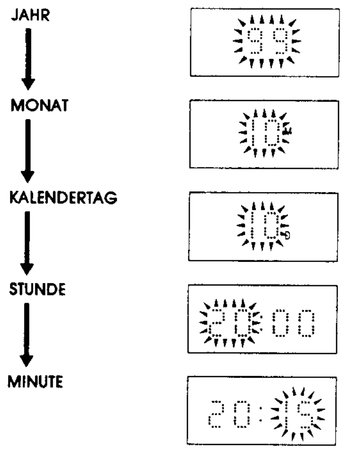
Einstellung der Uhr

Die eingebaute Uhr arbeitet im 24-Stunden-Zyklus.

Drücken Sie die **VTR**-Taste (1), um den Videorecorder einzuschalten.

1 Drücken Sie die **CLOCK**-Taste (4) zur Wahl der Betriebsart.
2 Betätigen Sie die **TRACKING/V-LOCK**-Tasten „+" und „–" (6) zur Einstellung jedes Uhrzeit-Parameters:
(Jahr, Monat, Kalendertag, Stunde, Minute).
Drücken Sie die **NEXT**-Taste (16), um auf den jeweils nächsten Parameter weiterzuschalten.

Beispiel:
Zum Einstellen auf 20:15 Uhr am Sonntag, dem 10. Oktober 1999.



3 Drücken Sie (z. B. am Zeitzeichen) die **NEXT**-Taste (16), um die Uhr mit dieser Uhrzeiteinstellung zu starten.

- Bei Stromausfall bleibt der gegenwärtige Inhalt des Zeitspeichers ca. 30 Sekunden lang im Speichersystem gesichert.

Automatischer Betrieb

Einschaltautomatik
Nach dem Einsetzen einer Cassette schaltet sich der Videorecorder automatisch ein.

Automatischer Wiedergabestart
Nach dem Einsetzen einer Cassette mit herausgebrochener Löschschutzlasche beginnt die Wiedergabe automatisch.

Rückspulautomatik
Nach Erreichen des Bandendes während der Aufnahme (außer bei OTR- und Timer-Aufnahmen) oder Wiedergabe spult der Videorecorder das Band automatisch an den Anfang zurück.

Automatischer Cassettenauswurf bei ausgeschalteter Stromzufuhr
Selbst bei ausgeschalteter Stromzufuhr kann eine Cassette durch einfaches Drücken der **EJECT**-Taste (10) ausgeworfen werden. Der Videorecorder schaltet sich dazu vorübergehend ein, stößt die Cassette aus und schaltet sich danach automatisch aus.

Automatische digitale Spurlageregelung
Sobald die Wiedergabe nach dem Einsetzen einer Cassette beginnt, wird die Spurlage automatisch digital geregelt.

Automatische Wiedergabefunktionen
Durch einfaches Drücken einer einzigen Taste können verschiedene praktische automatische Wiedergabefunktionen aktiviert werden.

Für Wiedergabe-Wiederholung
Drücken Sie die **REPEAT**-Taste (33).
Die Wiedergabe wird vom Bandanfang bis zum Ende des aufgezeichneten Teils automatisch wiederholt.

Für Speicherwiedergabe
Drücken Sie die **MEMORY**-Taste (32).
Das Band wird schnell an die Stelle vor- oder zurückgespult, an der das Zählwerk „0:00.00" anzeigt, wonach die Wiedergabe beginnt.

Für Einschlaf-Wiedergabe
Drücken Sie die **SLEEP**-Taste (40).
Die Wiedergabe beginnt sofort. Sobald das Ende des aufgezeichneten Teils der Cassette erreicht worden ist, wird das Band an den Anfang zurückgespult, und der Videorecorder schaltet sich aus.

Für Wiedergabestart nach Rückspulen
Drücken Sie die **REWIND**-Taste (41).
Das Band wird an den Anfang zurfpckgespult, wonach die Wiedergabe beginnt.

Wiedergabe

Bei der Wiedergabe kann das auf einer Cassette aufgezeichnete Bild betrachtet werden.

1 Setzen Sie eine bespielte Cassette (3) ein.
Wenn bereits eine Cassette eingesetzt ist, drücken Sie die **VTR**-Taste (1).
2 Drücken Sie die **PLAY**-Taste (20).
3 Um die Wiedergabe zu beenden, drücken Sie die **STOP**-Taste (22).

Wahl des Farbfernsehsystems
Drücken Sie die **PAL/MESECAM**-Taste (8) zur Wahl des Farbfernsehsystems, mit dem die Cassette bespielt wurde.
- Nach Wahl des MESECAM-Systems leuchtet die **MESECAM**-Anzeige (9) auf.

Verschiedene Betriebsvorgänge bei normaler Wiedergabe
Für kurzzeitige Cue-Wiedergabe (bei normaler Wiedergabe) halten Sie die **FF**-Taste (21) so lange gedrückt, wie das Band schnell in Vorwärtsrichtung wiedergegeben werden soll.
Für längere Cue-Wiedergabe (bei normaler Wiedergabe) drücken Sie die **FF**-Taste (21) einmal kurzzeitig, um die Cue-Wiedergabe zu starten. Um auf normale Wiedergabe zurückzukehren, drücken Sie die **PLAY**-Taste (20).
Für kurzzeitige Review-Wiedergabe (bei normaler Wiedergabe) halten Sie die **REW**-Taste (19) so lange gedrückt, wie das Band schnell in Rückwärtsrichtung wiedergegeben werden soll. Für längere Review-Wiedergabe (bei normaler Wiedergabe) drücken Sie die **REW**-Taste (19) einmal kurzzeitig, um die Review-Wiedergabe zu starten. Um auf normale Wiedergabe zurückzukehren, drücken Sie die **PLAY**-Taste (20).
Drücken Sie die **PAUSE/STILL**-Taste (23), um ein Standbild zu betrachten.
Drücken Sie die **STILL ADV**-Taste (46) zum Weiterschalten um jeweils ein Einzelbild.
Drücken Sie die **SLOW**-Taste (45) für Zeitlupen-Wiedergabe, wobei die Bandgeschwindigkeit mit den Tasten „+" und „–" (45) variiert werden kann.
- Wenn der Suchlaufbetrieb in Vorwärts- oder Rückwärtsrichtung länger als 10 Minuten ausgeführt wird, schaltet das Gerät automatisch auf normale Wiedergabe um.
- Wenn die Standbild-Wiedergabe länger als 5 Minuten ausgeführt wird, schaltet das Gerät automatisch in die Stopp-Betriebsart um.
- Wenn die Zeitlupen-Wiedergabe länger als 10 Minuten ausgeführt wird, schaltet das Gerät automatisch in die stopp-Betriebsart um.

Zum schnellen Vor- und Rückspulen aus der Stopp-Betriebsart
Drücken Sie die **FF**-Taste (21), um das Band schnell vorzuspulen.
Drücken Sie die **REW**-Taste (19), um das Band zurückzuspulen.

Suchlauf mit Überspringen
Drücken Sie die **SKIP**-Taste (39) während der Wiedergabe, wonach bei Suchlauf in Vorwärtsrichtung 30 Sekunden der normalen Wiedergabedauer übersprungen werden.
- Bei jedem Drücken der **SKIP**-Taste (39) werden der Reihe nach 30, 60, 90 und 120 Sekunden als Übersprung-Intervall eingestellt.

Zum Betrachten einer Fernsehsendung
Halten Sie die **MONITOR**-Taste (29) bei normaler oder Standbild-Wiedergabe gedrückt, um das Bild des jeweils abgestimmten Fernsehsenders zu betrachten.

Umschalten des Displays (12)
Drücken Sie die **CLOCK/COUNTER**-Taste (28), um zwischen Uhr- und Bandzählwerk-Anzeige bzw. umgekehrt umzuschalten.
- Wenn sich die Anzeige des Bandzählwerks bei Schnellvorlauf, Rückspulen oder einem beliebigen Wiedergabevorgang nicht ändert, bedeutet dies, daß auf dem betreffenden Bandabschnitt nichts aufgezeichnet ist.
- Beim Einsetzen einer Cassette wird das Bandzählwerk auf „0:00.00" rückgestellt.
- Drücken Sie die **RESET**-Taste (44), um das Bandzählwerk auf „0:00.00" rückzustellen.

Zum Justieren der Spurlage
Wenn Störstreifen im Wiedergabebild auftreten, drücken Sie die **TRACKING/V-LOCK**-Taste „+" oder „–" (6 oder 42).
Um auf die automatische digitale Spurlageregelung zurückzuschalten, drücken Sie die beiden **TRACKING/V-LOCK**-Taste „+" und „–" (6 oder 42) gleichzeitig.

Zum Justieren der Spurlage bei Zeitlupen-Wiedergabe
Wenn Störstreifen bei Standbild-Wiedergabe, Einzelbild-Weiterschaltung oder Zeitlupen-Wiedergabe im Bild auftreten, schalten Sie zunächst auf Zeitlupen-Wiedergabe und betätigen dann die **TRACKING/V-LOCK**-Tasten „+" und „–" (6 oder 42).

Zur Einstellung des vertikalen Bildfangs
Wenn das Bild bei Standbild-Wiedergabe vertikal „zittert", drücken Sie die **TRACKING/V-LOCK**-Taste „+" oder „–" (6 oder 42).

1-5. Aufnahme/OTR-Funktion/Timer-Programmierung

Aufnahme

Fernsehsendungen können auf Cassetten aufgezeichnet werden.

1 Setzen Sie eine Cassette ein.
Wenn bereits eine Cassette eingesetzt ist, drücken Sie die **VTR**-Taste (1).
2 Betätigen Sie die Programmwahltasten „∨" und „∧" (17) oder die Zifferntasten (38) zur Wahl des Programmplatzes.
3 Drücken Sie die **REC**-Taste (24).
4 Drücken Sie die **STOP**-Taste (22), um die Aufnahme zu beenden.

Zum vorübergehenden Unterbrechen der Aufnahme

Drücken Sie die **PAUSE/STILL**-Taste (23).
Um die Aufnahme danach fortzusetzen, drücken Sie die **PAUSE/STILL**-Taste (23) erneut.

Betrachten einer Fernsehsendung beim Aufnehmen einer anderen

Wählen Sie das Programm, das Sie sehen wollen, mit dem Tuner des Fernsehgerätes.

OTR-Funktion
(„One-Touch"-Timer-Aufnahme)

Die Endzeit der OTR-Aufnahme kann auf die Minute genau voreingestellt werden. Nach Erreichen der OTR-Endzeit schaltet sich der Videorecorder automatisch aus.

1 Setzen Sie eine Cassette ein.
Wenn bereits eine Cassette eingesetzt ist, drücken Sie die **VTR**-Taste (1).
2 Betätigen Sie die Programmwahltasten „∨" und „∧" (17) oder die Zifferntasten (38) zur Wahl des Programmplatzes.
3 Betätigen Sie die **OTR OFF**-Tasten „+" und „–" (18) zur Einstellung der OTR-Endzeit.

Zum Unterbrechen einer OTR-Aufnahme

Drücken Sie die **VTR**-Taste (1), um das Gerät auszuschalten.

Während der OTR-Aufnahme

—Um die gegenwärtige Uhrzeit anzeigen zu lassen:
Drücken Sie die **PROG/CHECK**-Taste (5).
—Um die Bandzählwerk-Anzeige abzurufen:
Drücken Sie die **CLOCK/COUNTER**-Taste (28).
—Um die OTR-Endzeit zu ändern:
Betätigen Sie die **OTR OFF**-Tasten „+" und „–" (18) zur Einstellung der neuen OTR-Endzeit.

- Überzeugen Sie sich, daß sich die für eine OTR-Aufnahme eingestellten Zeiten nicht mit einer normalen Timer-Programmierung überschneiden. Eine OTR-Aufnahme besitzt grundsätzlich Vorrang gegenüber einer normalen Timer-Aufnahme.

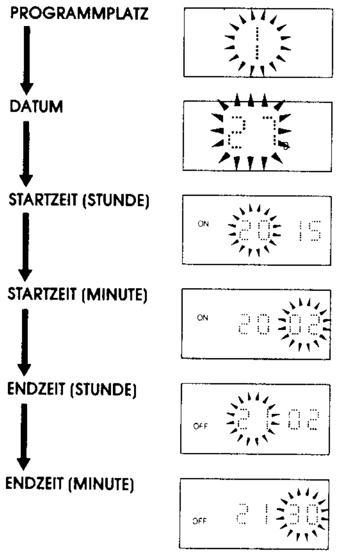
Timer-Programmierung

Maximal 8 Timer-Aufnahmen können im voraus programmiert werden, einschließlich der Programmierung auf täglicher (jeden Tag zum gleichen Zeitpunkt) und wöchentlicher Basis (jede Woche am gleichen Wochentag und zum gleichen Zeitpunkt).

Timer-Programmierung am Videorecorder

1 Drücken Sie die **PROG/CHECK**-Taste (5) zur Wahl der Timer-Programmnummer.
2 Betätigen Sie die **TRACKING/V-LOCK**-Tasten „+" und „–" (6) zur Einstellung jedes Parameters der Timer-Aufnahme:
(Programmplatz, Datum (jeden Tag oder jede Woche zum gleichen Zeitpunkt), Startzeit (Stunde, Minute) und Endzeit (Stunde, Minute)).
Drücken Sie die **NEXT**-Taste (16), um auf den jeweils nächsten Parameter weiterzuschalten.

Beispiel:
Programmieren einer Timer-Aufnahme für eine Sendung, die am 27. Tag des Monats von 20:02 Uhr bis 21:30 Uhr auf Programmplatz 1 ausgestrahlt wird.



3 Drücken Sie die **TIMER REC**-Taste (7), um den Videorecorder in den Bereitschaftszustand zu schalten.

Für unmittelbare Programmierung einer weiteren Timer-Aufnahme

Wiederholen Sie Schritt 2 für alle weiteren Timer-Programme.

VPS-Funktion

Die VPS-Anzeige erscheint automatisch, um eine VPS-geregelte Timer-Aufnahme zu kennzeichnen.
Wenn die VPS-Funktion nicht verwendet werden soll, drücken Sie die **AFC/VPS**-Taste (14).

Ein-/Ausschalten der Timer-Aufnahmefunktion

Drücken Sie die **TIMER REC**-Taste (7), um die Timer-Aufnahmefunktion ein- oder auszuschalten.

Für Timer-Aufnahme über die Buchse EURO AV (49)

Drücken Sie die **TRACKING/V-LOCK**-Taste „+" oder „–" (6) in Schritt 2 zur Wahl von Programmplatz „A1".

Zum Überprüfen der Timer-Programmierung

Drücken Sie die **PROG/CHECK**-Taste (5) wiederholt, um die Einstellungen der einzelnen Parameter der Reihe nach zu überprüfen.

Zum Annullieren einer Timer-Programmierung

Drücken Sie die **TIMER REC**-Taste (7), wählen Sie die Timer-Programmnummer durch Drücken der **PROG/CHECK**-Taste (5) und halten Sie dann die beiden **TRACKING/V-LOCK**-Tasten „+" und „–" (6) mindestens 3 Sekunden lang gedrückt.

- Wenn eine Timer-Aufnahme nicht ausgeführt wird: Die Timer-Programmierung wird zwei Tage später um 4 Uhr morgens aus dem Speicher gelöscht.
- Falls zu diesem Zeitpunkt jedoch die Timer-Aufnahmefunktion aktiviert ist oder eine OTR-Aufnahme ausgeführt wird, so wird die Timer-Programmierung am folgenden Tag um 4 Uhr morgens gelöscht.

1-6. Timer-Programmierung (Fortsetzung)/VHS-Index-Suchlauf

Timer-Programmierung (Fortsetzung)

Timer-Programmierung an der Fernbedienung

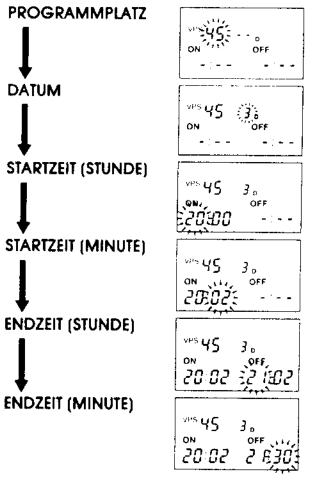
1 Drücken Sie die **PROG**-Taste (34) zur Wahl der Programmier-Betriebsart.

2 Betätigen Sie die Zifferntasten (38) zur Einstellung jedes Parameters der Timer-Aufnahme:

(Programmplatz, Datum (jeden Tag oder jede Woche zum gleichen Zeitpunkt), Startzeit (Stunde, Minute) und Endzeit (Stunde, Minute)).

Drücken Sie die **NEXT**-Taste (35), um auf den jeweils nächsten Parameter weiterzuschalten.

Beispiel:
Programmieren einer Timer-Aufnahme für eine Sendung, die am 3. Tag des Monats von 20:02 Uhr bis 21:30 Uhr auf Programmplatz 45 ausgestrahlt wird.



3 Drücken Sie die **TRANSMIT**-Taste (26), während Sie die Fernbedienung auf das Empfangsfenster am Videorecorder richten.

Für unmittelbare Programmierung einer weiteren Timer-Aufnahme
Drücken Sie die **PROG**-Taste (34) zweimal und geben Sie dann die Daten für die nächste Timer-Programmierung ein.

Zur Eingabe einer zweistelligen Programmplatznummer
Drücken Sie zunächst die Taste -/-- (38) und dann die beiden entsprechenden Zifferntasten.

Programmierung einer täglichen Timer-Aufnahme
Drücken Sie zunächst **9 MO~SA** (38) und dann **8 SU~SA** (38), **9 MO~SA** (38) oder **0 MO~FR** (38) innerhalb von 5 Sekunden.

Programmierung einer wöchentlichen Timer-Aufnahme
Drücken Sie zunächst **9 MO~SA** (38) und dann die entsprechende Taste für den Wochentag von **1 SU** bis **7 SA** (38) innerhalb von 5 Sekunden.

VPS-Funktion
Drücken Sie die **VPS**-Taste (36), um die VPS-Funktion auszuschalten.

Ein-/Ausschalten der Timer-Aufnahmefunktion
Drücken Sie die **TIMER REC**-Taste (7), um die Timer-Aufnahmefunktion ein- oder auszuschalten.

Für Timer-Aufnahme über die Buchse EURO AV (49)
Drücken Sie die **INPUT SELECT**-Taste (43) in Schritt 2 zur Wahl von Programmplatz „A1".

Zum Überprüfen der Timer-Programmierung
Drücken Sie die **TRANSMIT**-Taste (26) wiederholt.

Zum Annulieren einer Timer-Programmierung
Wählen Sie die betreffende Timer-Programmnummer durch Drücken der **TRANSMIT**-Taste (26) und drücken Sie dann die **CANCEL**-Taste (37).

- Wenn innerhalb von 25 Sekunden keine Taste an der Fernbedienung gedrückt wird, schaltet sie automatisch in den stromsparenden Bereitschaftszustand um. In einem solchen Fall werden die Daten auf dem Anzeigefeld der Fernbedienung annulliert.

VHS-Index-Suchlauf

Mit Hilfe dieser Funktion lassen sich gewünschte Szenen schnell auffinden.

Index-Suchlauf

1 Drücken Sie die **INDEX**-Taste (31) während der Wiedergabe oder bei gestopptem Bandlauf.

2 Drücken Sie die entsprechende Zifferntaste (38) zur Eingabe der gewünschten Indexnummer.

3 Drücken Sie die **FF**- (21) oder die **REW**-Taste (19), um den Index-Suchlauf zu starten.

Die Wiedergabe beginnt automatisch, sobald die vorgegebene Indexnummer erreicht worden ist.

Um den Index-Suchlauf zu beenden, drücken Sie die **PLAY**- (20) oder die **STOP**-Taste (22).

Aufnehmen von Indexsignalen

Dies erfolgt automatisch nach Drücken der **REC**-Taste (24), um mit der Aufnahme zu beginnen.
Bei einer Timer- oder OTR-Aufnahme drücken Sie die **REC**-Taste (24) an der gewünschten Stelle, um ein Indexsignal aufzuzeichnen.

Wiedergabe-Wiederholung mit Index-Suchlauf

1 Drücken Sie die **INDEX**-Taste (31).

2 Drücken Sie die **REPEAT**-Taste (33).

Nach Erreichen der nächsten Indexnummer wird das Band zurückgespult. Sobald die Indexnummer erreicht wird, an der die Wiedergabe beginnen soll, wird die Wiedergabe erneut gestartet. Auf diese Weise kann die Wiedergabe eines bestimmten Bandabschnitts, der über die Anzahl der übersprungenen Indexsignale festgelegt wird, automatisch wiederholt werden.
Um die Wiedergabe-Wiederholung zu stoppen: Drücken Sie die **STOP**-Taste (33).

Anspielfunktion

Diese Funktion ermöglicht es, die ersten 10 Sekunden jedes mit einem Indexsignal versehenen Aufnahmesegments auf dem Band der Reihe nach wiedergeben zu lassen.

1 Drücken Sie die **INDEX**-Taste (31) bei gestopptem Bandlauf.

2 Drücken Sie die **FF**-Taste (21), um die Anspielfunktion zu aktivieren.

Sobald die gewünschte Szene erreicht ist, drücken Sie die **PLAY**-Taste (20), um die normale Wiedergabe zu beginnen.

1-7. Zielsuchlauf/Überspielen (Kopieren)/Bedienung des Strichcodelesers

Zielsuchlauf

Diese Funktion ermöglicht das Aufsuchen einer gewünschten Szene durch Eingabe der exakten Wiedergabezeit des Bandabschnitts, der übersprungen werden soll.

1 Drücken Sie die **TIME SEARCH**-Taste (30) bei normaler Wiedergabe oder gestopptem Bandlauf.
2 Geben Sie die Wiedergabezeit über die Ziffertasten (38) ein.
3 Drücken Sie die **FF**- (21) oder die **REW**-Taste (19), um den Zielsuchlauf zu starten.
Nachdem die der eingegebenen Wiedergabezeit entsprechende Bandstelle während des Schnellvorlaufs bzw. des Rückspulens erreicht worden ist, beginnt die Wiedergabe automatisch.

- **Zielsuchlauf während der Wiedergabe**
Eine Wiedergabezeit von maximal 59 Minuten 59 Sekunden kann eingegeben werden.

Beispiel: =0:10.20
+0:20.00
=0:30.20

Überspielen (Kopieren)

Diese Funktion dient zum Duplizieren einer bespielten Cassette.

1 Schließen Sie die Video-Programmquelle an die Buchse **EURO AV** (49) an.
2 Drücken Sie die **INPUT SELECT**-Taste (43) zur Wahl von Programmplatz „A1".
3 Drücken Sie die **REC**-Taste (24).
4 Beginnen Sie mit der Wiedergabe der bespielten Cassette an der Video-Programmquelle.

Wahl des Farbfernsehsystems

Drücken Sie die **PAL/MESECAM**-Taste (8) zur Wahl des Farbfernsehsystems der Video-Programmquelle.

Für nahtlose Übergänge beim Überspielbeginn

1 Starten Sie die Wiedergabe, um das Ende des letzten Programmsegments auf dem Band aufzusuchen, und drücken Sie an dieser Stelle die **PAUSE/STILL**-Taste (23).
2 Drücken Sie die **REC**-Taste (24), um den Videorecorder auf Aufnahme-Bereitschaft zu schalten.
3 Starten Sie die Aufzeichnung durch erneutes Drücken der **PAUSE/STILL**-Taste (23).

Bedienung des Strichcodelesers

Mit Hilfe des Strichcodelesers an der Fernbedienung ist eine bequeme Programmierung von Timer-Aufnahmen über die Strichcodes auf dem Programmierblatt möglich.

Einstellung der Uhr über Strichcodes

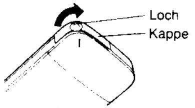
1 Drücken Sie die **SCANNER ON/OFF**-Taste (27).
2 Überstreichen Sie den Strichcode **„SETTING OF THE CLOCK/EINSTELLUNG DER UHRZEIT"**.
3 Überstreichen Sie die Strichcodes zur Einstellung jedes Parameters der Timer-Aufnahme:
YEAR/JAHR, MONTH/MONAT, DATE/TAG, START TIME/STARTZEIT und MIN.
4 Drücken Sie die **TRANSMIT**-Taste (26), während Sie die Fernbedienung auf das Empfangsfenster am Videorecorder richten.

- Wenn innerhalb von 4 Minuten keine Bedienung vorgenommen wird, schaltet der Strichcodeleser automatisch in den stromsparenden Bereitschaftszustand um, und die Lampe in der Spitze erlischt. In einem solchen Fall werden die bereits eingelesenen, aber noch nicht an den Videorecorder übertragenen Strichcodes annulliert.

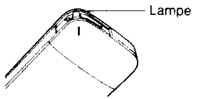
Wenn die Strichcodes nicht eingelesen werden können

Die Spitze des Strichcode-Leseteils ist wahrscheinlich mit Schmutz oder Staub verstopft.

1 Nehmen Sie die Kappe des Strichcode-Leseteils ab und entfernen Sie Schmutz und Staub vom Loch in der Kappe.



2 Reiben Sie die Spitze der Glühbirne sacht mit einem weichen Tuch ab und bringen Sie die Kappe wieder so an, daß sie mit einem Klickgeräusch einrastet.



- Die Strichcodes **VTR 1, VTR 2, SP, LP** und **AV2** können nicht mit diesem Gerät verwendet werden. Falls der Strichcode **„VTR 2"** versehentlich überstrichen wurde, überstreichen Sie sofort den Strichcode **"VTR 1"**, wonach die Anzeige **„VTR 2"** vom Anzeigefeld der Fernbedienung verschwindet, oder entnehmen die Batterien für ca. 60 Sekunden.

Timer-Programmierung über Strichcodes

1 Drücken Sie die **SCANNER ON/OFF**-Taste (27).
2 Überstreichen Sie den Strichcode **„1 CHANNEL/PROGR.-PLATZ"** zur Wahl des Programmplatzes.
3 Überstreichen Sie den Strichcode **„2 DATE/TAG"** und ggf. **„EVERYWEEK/WÖCHENTLICH"** oder **„EVERYDAY/TÄGLICH"**.
4 Überstreichen Sie den Strichcode **„3 START TIME/STARTZEIT"** und ggf. **„MIN"**.
5 Überstreichen Sie den Strichcode **„4 END TIME/STOPPZEIT"** und ggf. **„MIN"**.
6 Drücken Sie die **TRANSMIT**-Taste (26), während Sie die Fernbedienung auf das Empfangsfenster am Videorecorder richten.

Für unmittelbare Programmierung einer weiteren Timer-Aufnahme

Überstreichen Sie den Strichcode **„CANCEL/LÖSCHEN"** und wiederholen Sie dann Schritt 2 bis 6.

VPS-Funktion

Überstreichen Sie den Strichcode **„VPS ON/OFF"** und übertragen Sie die Daten an den Videorecorder, wenn die VPS-Funktion nicht verwendet werden soll.

Ein-/Ausschalten der Timer-Aufnahmefunktion

Überstreichen Sie den Strichcode **„TIMER ON/OFF"** und übertragen Sie die Daten an den Videorecorder, um die Timer-Aufnahmefunktion ein- oder auszuschalten.

Für Timer-Aufnahme über die Buchse EURO AV (49)

Überstreichen Sie den Strichcode **„AV1"**.

Überprüfen einer Timer-Programmierung

Überstreichen Sie den Strichcode **„CHECK/PRÜFEN"** und übertragen Sie die Daten an den Videorecorder. Drücken Sie dann die **TRANSMIT**-Taste (26), um die programmierten Daten der Reihe nach anzeigen zu lassen.

Annullieren einer Timer-Programmierung

Überstreichen Sie den Strichcode **„CHECK/PRÜFEN"** und übertragen Sie die Daten an den Videorecorder, bis die Programmierung angezeigt wird, die annulliert werden soll.
Überstreichen Sie den Strichcode **„CANCEL/LÖSCHEN"** und übertragen Sie die Daten an den Videorecorder.

- Wenn innerhalb von 25 Sekunden keine Taste an der Fernbedienung gedrückt wird, schaltet sie automatisch in den stromsparenden Bereitschaftszustand um. In einem solchen Fall werden die Daten auf dem Anzeigefeld der Fernbedienung annulliert.

1-8. Vor Inanspruchnahme des Kundendienstes

Vor Inanspruchnahme des Kundendienstes

Das Bild ist stark verrauscht oder in Schwarzweiß.

Die Spurlage ist falsch eingestellt.
—Obwohl die digitale Spurlageregelung normalerweise eine gute Bildqualität gewährleistet, muß die Spurlage bei Cassetten, die mit einem anderen Videorecorder bespielt wurden, u.U. manuell justiert werden.
Die Videoköpfe sind abgenutzt.
—Feuchtigkeit kann sich im Videorecorder gebildet haben, oder die verwendete Cassette ist defekt. 1 Stunde warten, dann eine andere Cassette einsetzen und einige Minuten lang wiedergeben. Wenn die Störung nicht verschwindet, den Kundendienst konsultieren.
Die Videoköpfe sind verschmutzt.
—Das gleiche Verfahren wie bei Abnutzung der Videoköpfe ausführen. Wenn die Störung nicht verschwindet, den Kundendienst konsultieren.

Waagerechte Störstreifen oder Linien, die senkrecht durch das Bild laufen oder sich nicht bewegen.

Das Band ist beschädigt oder abgenutzt.

Ein akustisches Signal ertönt, sobald eine Aufnahme gestartet wird.

Die Löschschutzlasche der Cassette wurde herausgebrochen.
—Eine Cassette mit intakter Löschschutzlasche verwenden oder das Loch mit Klebeband überkleben, wenn die frühere Aufzeichnung gelöscht werden kann.

Das aufgezeichnete Bild ist verrauscht oder leer.

Antenne oder Antennenzuleitung ist defekt.
—Den Antennenanschluß an den Videorecorder überprüfen.
—Das normale Fernsehbild überprüfen. Wenn kein Bild erscheint, die Antenne überprüfen.
Der Videorecorder ist falsch abgestimmt.
—Den Videorecorder neu abstimmen.
—Die **INPUT SELECT**-Taste (43) zur Wahl eines Programmplatzes drücken.
Das Eingangssignal wird nicht richtig gewählt.
—Die **INPUT SELECT**-Taste (43) zur Wahl von „AV1" für die externe Programmquelle oder eines Programmplatzes drücken.

Die OTR-Aufnahme funktioniert nicht.

Die Uhrzeitanzeige „0:00" blinkt.
—Die Uhr auf die gegenwärtige Uhrzeit einstellen.

Die Timer-Aufnahme kann nicht ausgeführt werden.

Die Uhr ist falsch eingestellt.
—Die gegenwärtige Uhrzeit und das Datum überprüfen und die Einstellungen ggf. korrigieren.

Die Fernbedienung arbeitet nicht richtig.

Der Abstand ist zu groß.
—Die Fernbedienung innerhalb von 7 Metern vom Videorecorder benutzen.
Die Batterien sind erschöpft.
—Die Batterien ersetzen (Typ UM3, IEC-Kennung R6; vom Panasonic-Fachhändler erhältlich).

Das Einlesen von Strichcodes ist nicht möglich.

Der Strichcodeleser befindet sich im stromsparenden Bereitschaftszustand.
—Den Strichcodeleser erneut einschalten.
Die Kappe des Strichcode-Leseteils ist blockiert.
—Die Kappe entfernen und reinigen.

Die Strichcodedaten können nicht an den Videorecorder übertragen werden.

Alle Timer-Programmnummern sind belegt.
—Eine der Timer-Programmierungen annullieren oder warten, bis eine Timer-Aufnahme ausgeführt wurde.

SECTION 2
ADJUSTMENT PROCEDURES

2-1. DISASSEMBLY METHOD

2–1–1. DISASSEMBLY FLOW CHART

This flow chart indicates disassembly steps of the cabinet parts and the circuit boards in order to find the necessary items for servicing.
When reassembling, perform the steps in the reverse order.

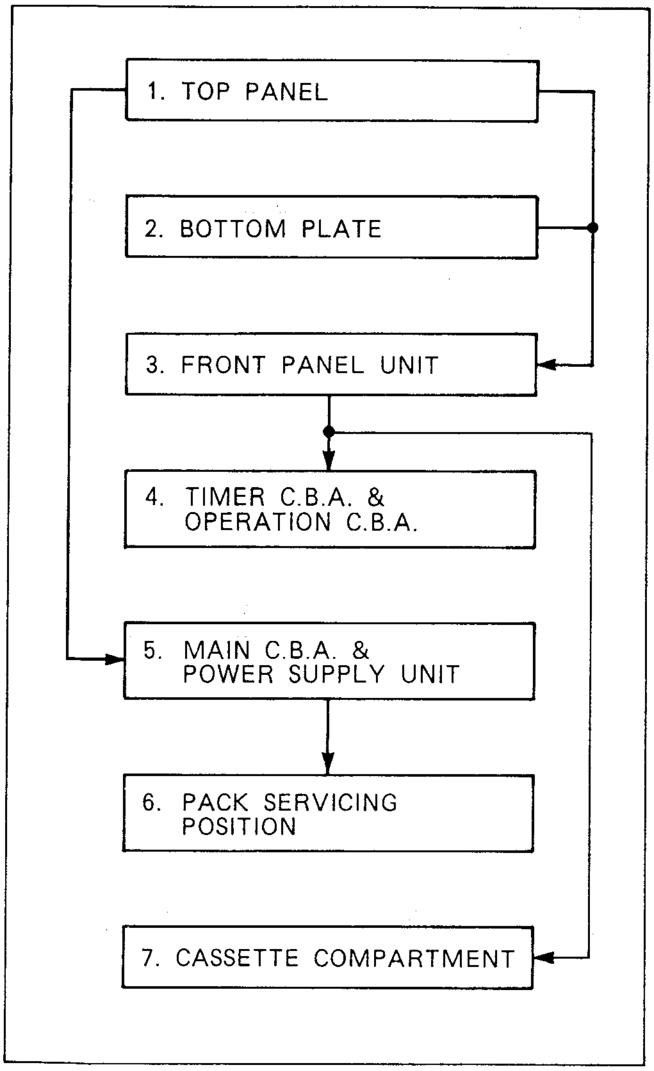

1. TOP PANEL
2. BOTTOM PLATE
3. FRONT PANEL UNIT
4. TIMER C.B.A. & OPERATION C.B.A.
5. MAIN C.B.A. & POWER SUPPLY UNIT
6. PACK SERVICING POSITION
7. CASSETTE COMPARTMENT

Fig. D1

2–1–2. DETAIL OF DISASSEMBLY METHOD

1. REMOVAL OF THE TOP PANEL

Remove ... 4 Screws (A)

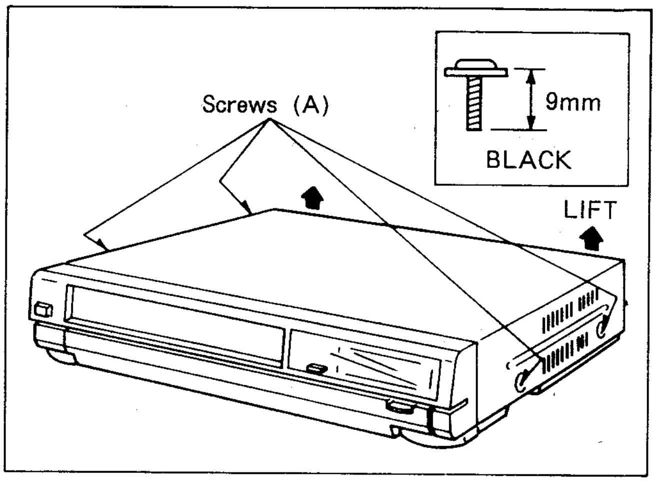

Screws (A)
9mm
BLACK
LIFT

Fig. D2

2. REMOVAL OF THE BOTTOM PLATE

Remove ... 7 Screws (B)

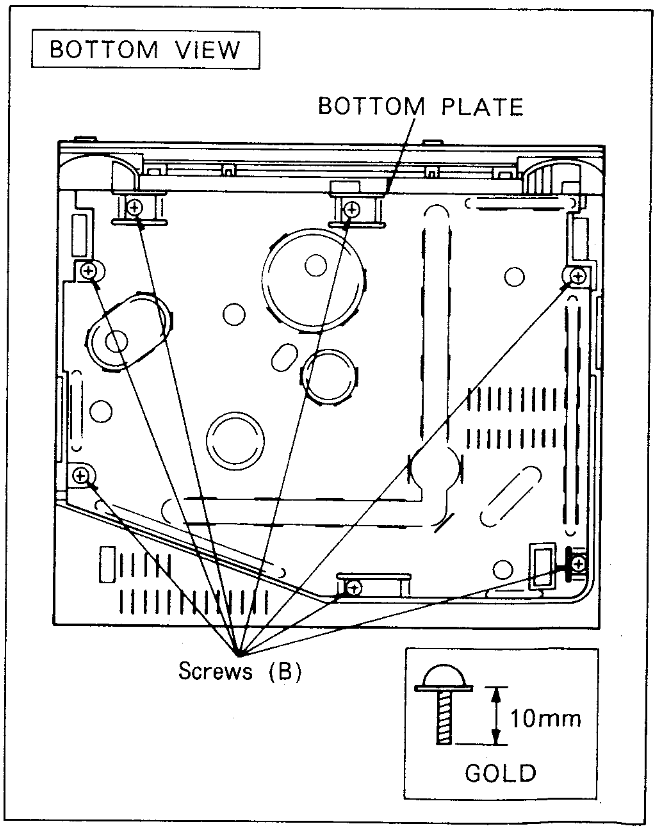

BOTTOM VIEW
BOTTOM PLATE
Screws (B)
10mm
GOLD

Fig. D3

3. REMOVAL OF THE FRONT PANEL UNIT

Remove ... Screw (C)
Unlock ... 6 Tabs (D)

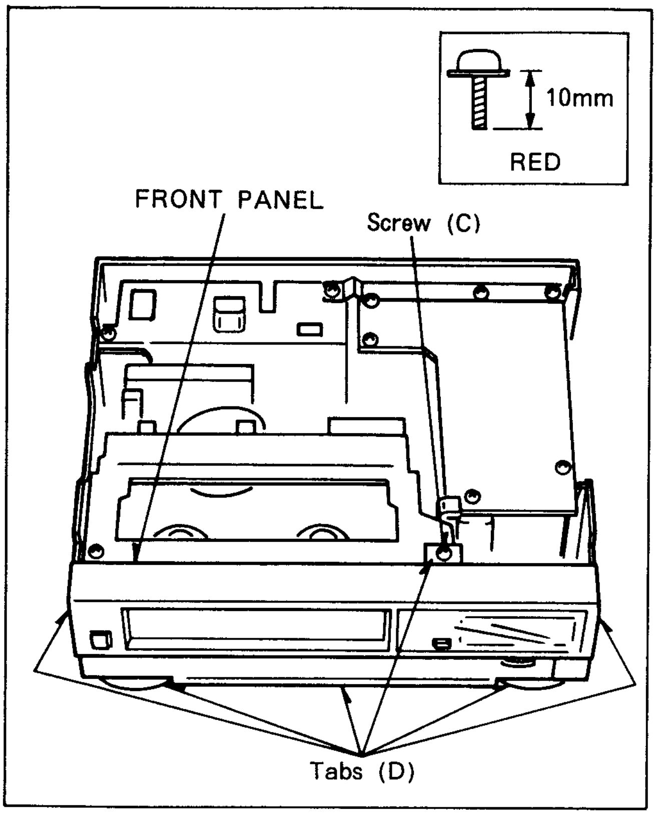

10mm
RED
FRONT PANEL
Screw (C)
Tabs (D)

Fig. D4

4. REMOVAL OF THE TIMER C.B.A. & OPERATION C.B.A.

REMOVAL OF THE TIMER C.B.A.

Disconnect ... Bridge Connector (E)
Unlock ... 7 Tabs (F)

REMOVAL OF THE OPERATION C.B.A.

Disconnect ... Bridge Connector (E)
Unlock ... 2 Tabs (G)

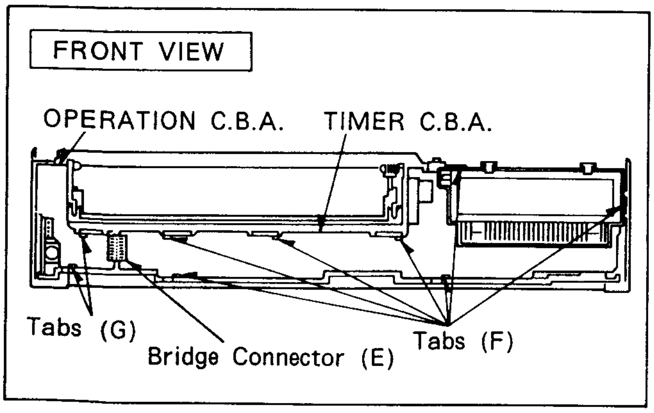

FRONT VIEW
OPERATION C.B.A.
TIMER C.B.A.
Tabs (G)
Bridge Connector (E)
Tabs (F)

Fig. D5

5. REMOVAL OF THE MAIN C.B.A. & POWER SUPPLY UNIT

REMOVAL OF MAIN C.B.A.

Remove ... Screw (H)
Remove ... 3 Screws (J)
Remove ... 2 Screws (K)

REMOVAL OF THE POWER SUPPLY UNIT

Remove ... Screw (H)
Remove ... Screw (L)
Remove ... 2 Screws (M)

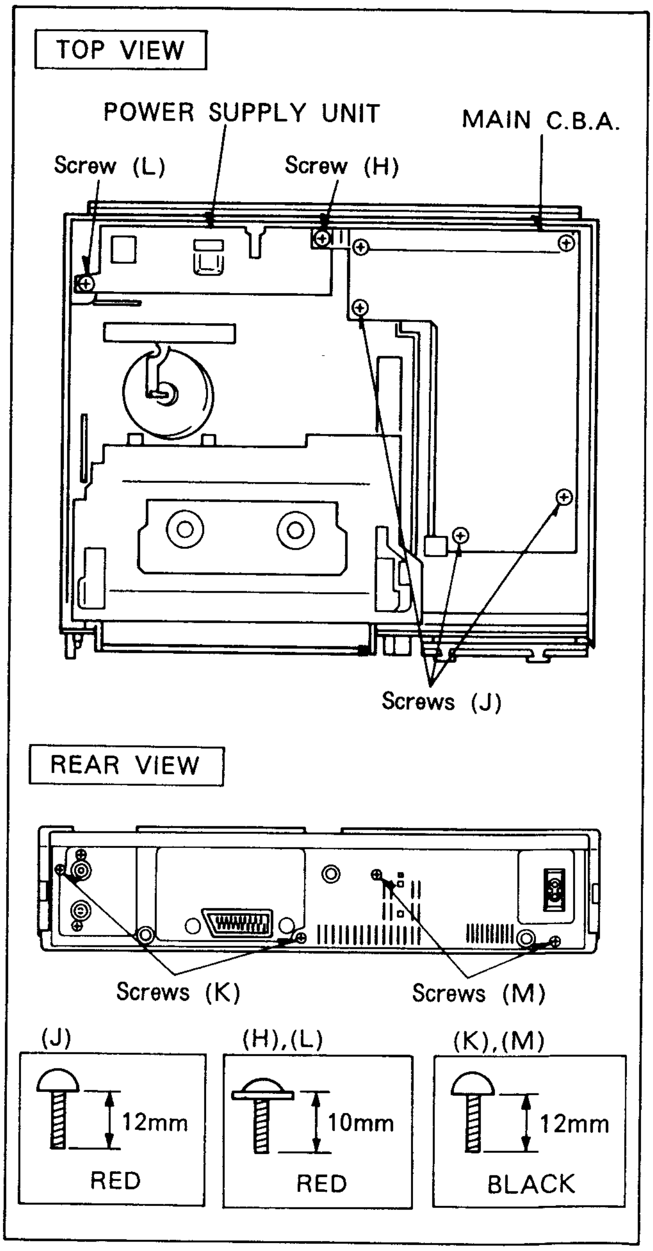

TOP VIEW
POWER SUPPLY UNIT
MAIN C.B.A.
Screw (L)
Screw (H)
Screws (J)
REAR VIEW
Screws (K)
Screws (M)
(J)
12mm
RED
(H),(L)
10mm
RED
(K),(M)
12mm
BLACK

Fig. D6

6. PACK SERVICING POSITION

CAUTION:

Do not allow the Main C.B.A to touch the Mechanical Chassis,when Main AC is connected.

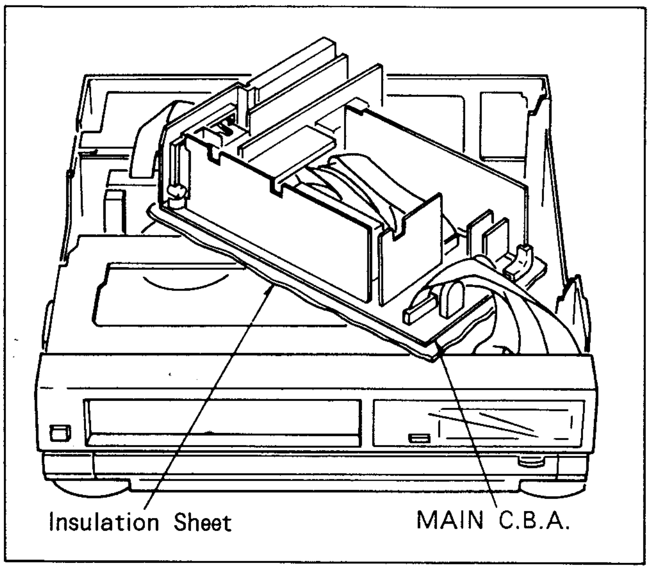

Insulation Sheet
MAIN C.B.A.

Fig. D7

7. REMOVAL OF THE CASSETTE COMPARTMENT

Remove 2 screws(N) and screw(S).
Turn the Capstan Mortor clockwise (Fig.D9) to slide the Cassette unit forward,untill 2 screws(O) can be seen through the holes. Remove 2 screws(O). Remove the wire cable from connector P1508 mounted on Take-up Photo Tr. C.B.A.,and remove connector P1512 on FE head. Then carefully pull out the Cassette Compartment.

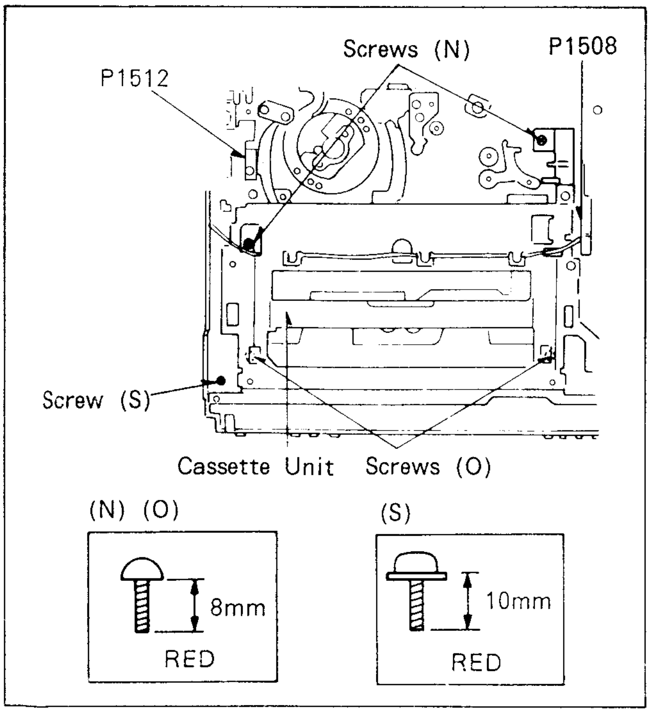

Screws (N)
P1508
P1512
Screw (S)
Cassette Unit
Screws (O)
(N) (O)
8mm
RED
(S)
10mm
RED

Fig. D8

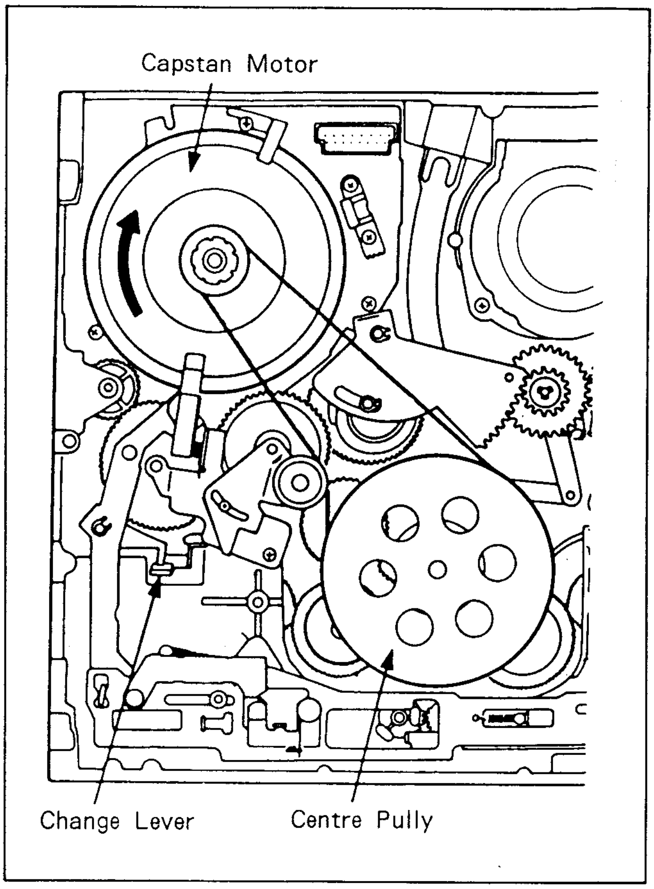

Capstan Motor
Change Lever
Centre Pully

Fig. D9

NOTE:

When reinstalling the Cassette compartment, mechanical adjustment (alignment) must be performed for correct working. Refer to Service Manual. (G1 (G-Rev.) mechanical chassis) (Order No. VRD8901M101).

2-2. MECHANICAL ADJUSTMENT PROCEDURES

The mechanical chassis of NV−J37EG is the same as G1(G−Rev.) Mechanical Chassis. Therefore ,please refer to the Service Manual G1(G−Rev.) Mechanical Chassis(Order No. VRD8901M101).

2−2−1. TAPE INTERCHANGEABILITY ADJUSTMENT

CAUTIONS:

Make a Adjustment Mode as shown in Fig. M1 (Connect a Cut Jumper. Wire.)

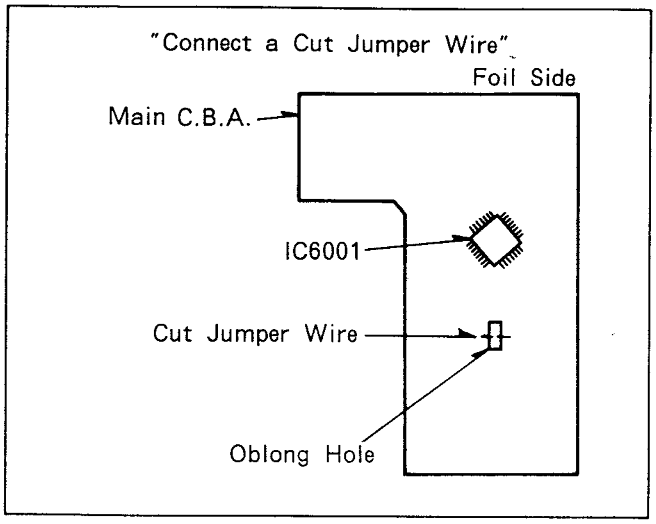
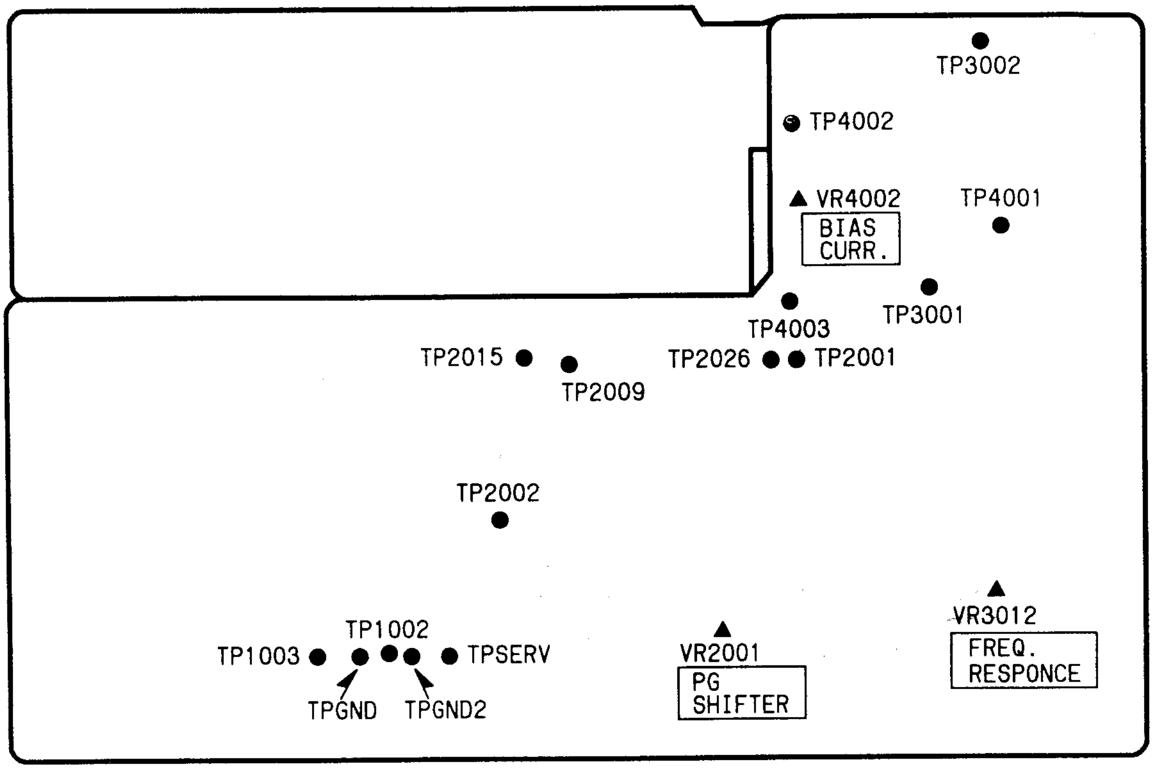

"Connect a Cut Jumper Wire"
Foil Side
Main C.B.A.
IC6001
Cut Jumper Wire
Oblong Hole

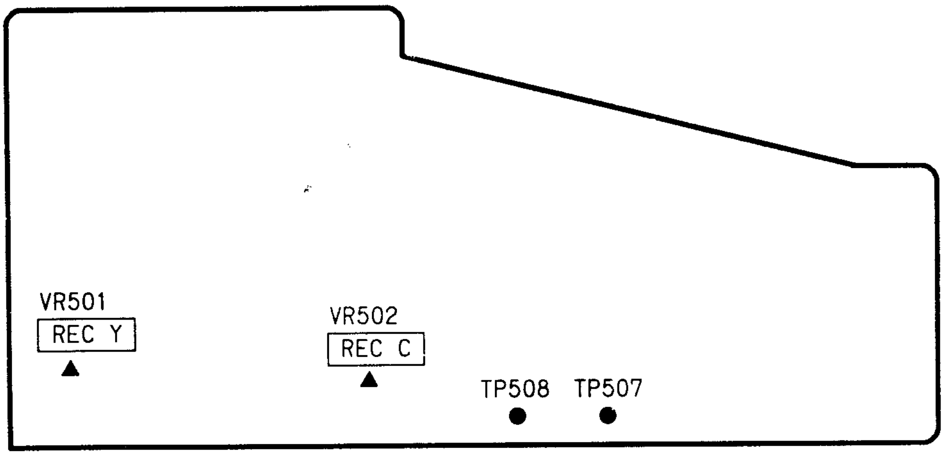
Fig. M1 Adjustment Mode

LOCATION OF TEST POINTS & CONTROLS

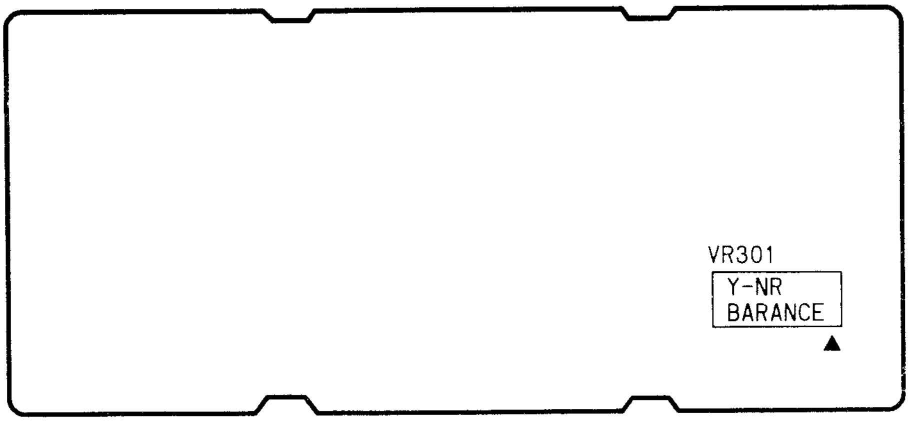
MAIN C.B.A.


TP3002
TP4002
VR4002
BIAS CURR.
TP4001
TP4003
TP3001
TP2015
TP2009
TP2026
TP2001
TP2002
TP1002
TP1003
TPSERV
TPGND
TPGND2
VR2001
PG SHIFTER
VR3012
FREQ. RESPONCE

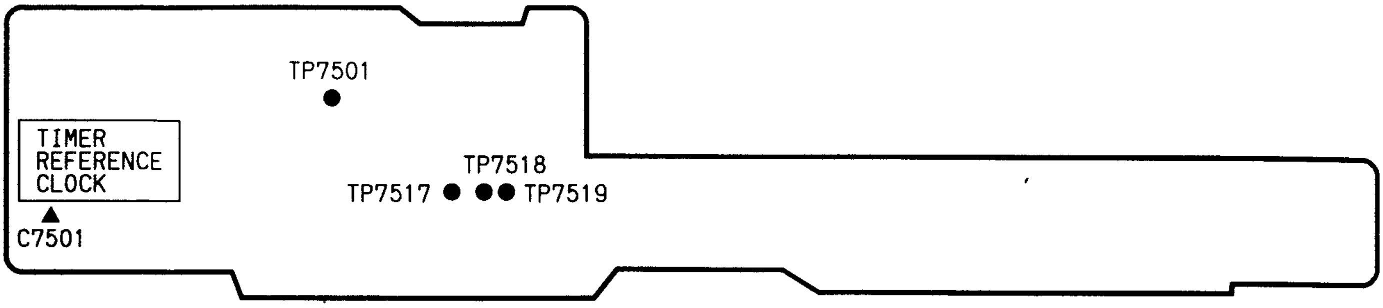
HEAD AMP C.B.A.


VR501
REC Y
VR502
REC C
TP508
TP507

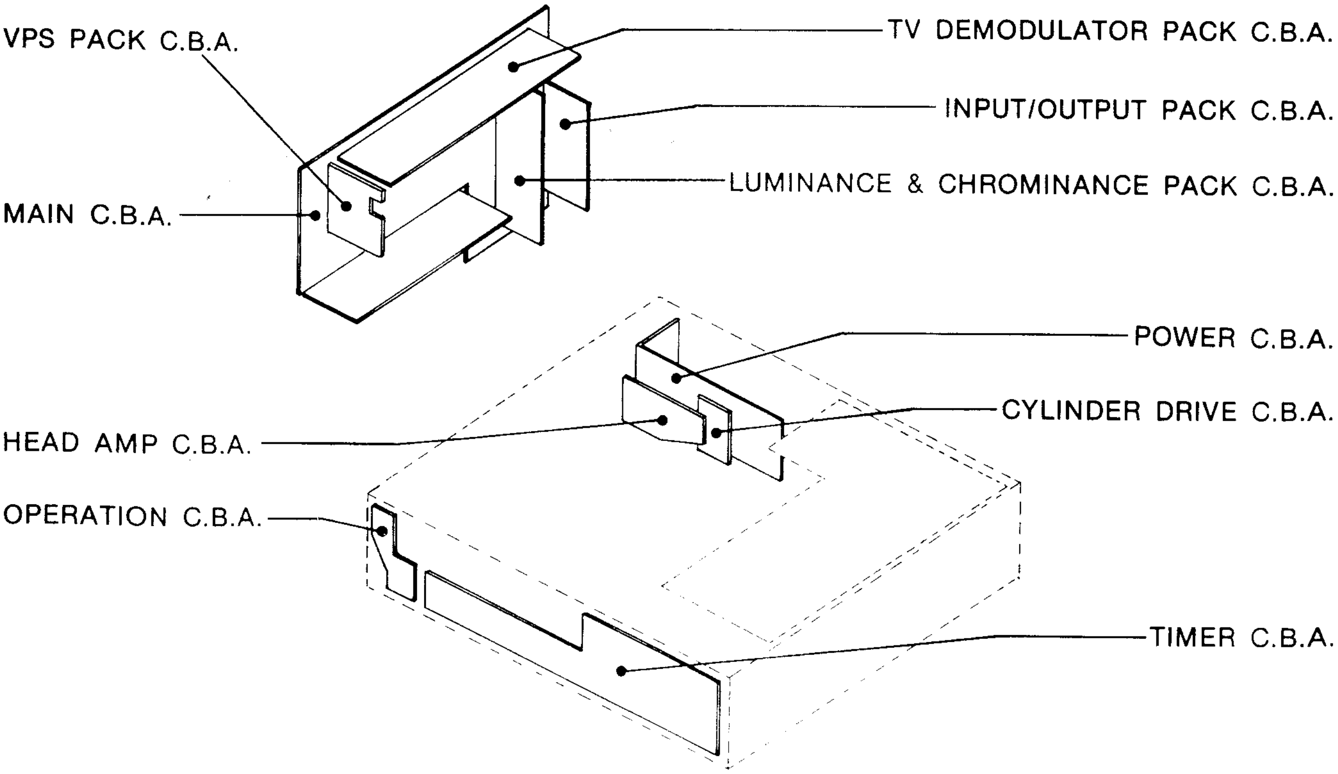
LUMINANCE & CHROMINANCE PACK C.B.A.


VR301
Y-NR BARANCE

TIMER C.B.A.


TP7501
TIMER REFERENCE CLOCK
C7501
TP7518
TP7517
TP7519

CIRCUIT BOARD LAYOUT


VPS PACK C.B.A.
TV DEMODULATOR PACK C.B.A.
INPUT/OUTPUT PACK C.B.A.
MAIN C.B.A.
LUMINANCE & CHROMINANCE PACK C.B.A.
POWER C.B.A.
CYLINDER DRIVE C.B.A.
HEAD AMP C.B.A.
OPERATION C.B.A.
TIMER C.B.A.

2-3. ELECTRICAL ADJUSTMENT PROCEDURES

This section provides complete electrical adjustment procedures which may be required for electric circuits of VHS Video Cassette Recorders.

2–3–1. TEST EQUIPMENTS

To perform the electrical adjustments completely, following equipments are required.

1. Dual–Trace Oscilloscope. (Mode than 35 MHz)
   Voltage Range: 0.005–5V/div
   Frequency Range: DC–35MHz
   Probes: 10:1
2. Frequency Counter.
   Frequency Range: 0–10MHz
   Probes: 1:1
3. Universal Counter.
4. Vacuum Tube Volt Meter. (V.T.V.M.)
5. Video Sweep Generator.
6. Sine Wave Generator.
7. Video Pattern Generator.
8. VHS Alignment Tape. (VFJ8125H3F)
9. VHS Blank Tape.
10. Monitor.
11. Plastic Tip Driver.

2–3–2. HOW TO READ ADJUSTMENT PROCEDURES

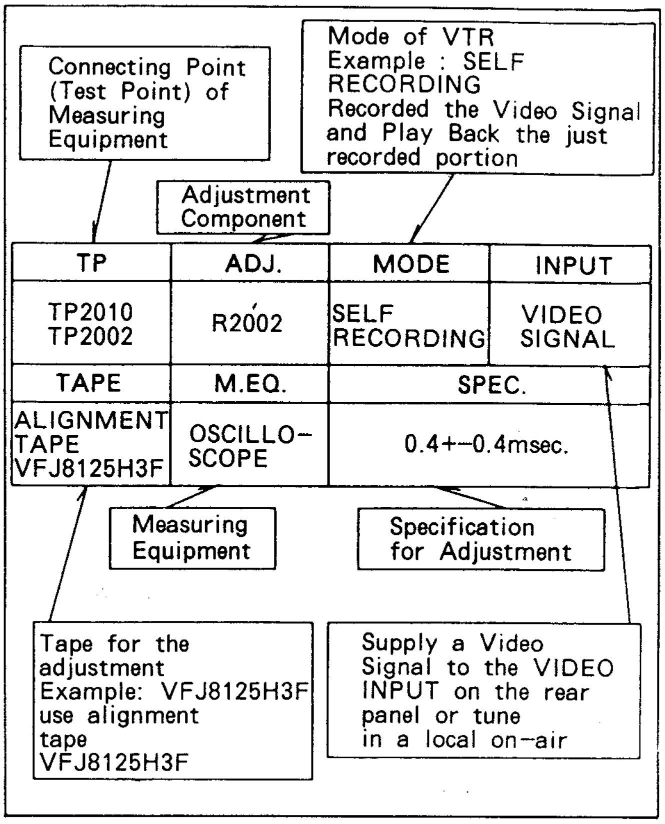

Connecting Point (Test Point) of Measuring Equipment
Mode of VTR Example : SELF RECORDING Recorded the Video Signal and Play Back the just recorded portion
Adjustment Component
TP
ADJ.
MODE
INPUT
TP2010
TP2002
R2002
SELF RECORDING
VIDEO SIGNAL
TAPE
M.EQ.
SPEC.
ALIGNMENT TAPE VFJ8125H3F
OSCILLO–SCOPE
0.4+–0.4msec.
Measuring Equipment
Specification for Adjustment
Tape for the adjustment Example: VFJ8125H3F use alignment tape VFJ8125H3F
Supply a Video Signal to the VIDEO INPUT on the rear panel or tune in a local on–air

Fig. E1

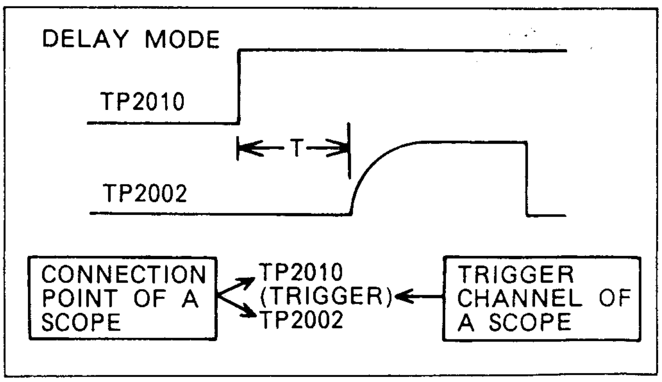

DELAY MODE
TP2010
T
TP2002
CONNECTION POINT OF A SCOPE
TP2010
(TRIGGER)
TP2002
TRIGGER CHANNEL OF A SCOPE

Fig. E2

SERVO SECTION

2-3-3. PG SHIFTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2001 TP3002	VR2001	PLAYBACK	
TAPE	**M. EQ.**	**SPEC.**	
ALIGNMENT TAPE VFJ8125H3F	OSCILLO-SCOPE	6.5+-0.5(H)	

1. Connect the oscilloscope to TP2001(H.SW) and TP3002(V.OUT).
2. Playback the alignment tape.
3. Adjust the VR2001 until the phase difference between falling edge of the Head. SW pulse and V-Sync is 7.0+-0.5[H].

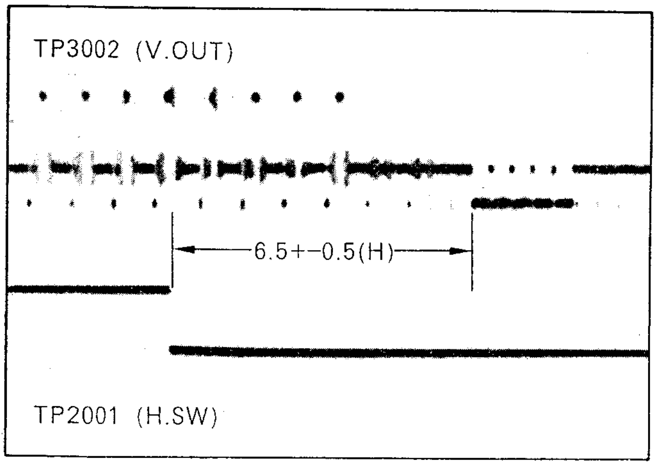

TP3002 (V.OUT)
6.5+-0.5(H)
TP2001 (H.SW)

Fig. E3

LUMINANCE & CHROMINANCE SECTION

2-3-4. Y-NR BALANCE ADJUSTMENT

TP	ADJ.	MODE	INPUT
PIN (17) of IC302	VR301	RECORDING	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	MINIMIZED AS POSSIBLE (Less than 50mVp-p)	

Note:
Connect the capacitor 1500pF between Pin 17 of IC302 and GND.

1. Record the colour bar.
2. Connect the oscilloscope to Pin 17 of IC302.
3. Adjust the VR301 until the amplitude at Pin 17 of IC302 is minimum.

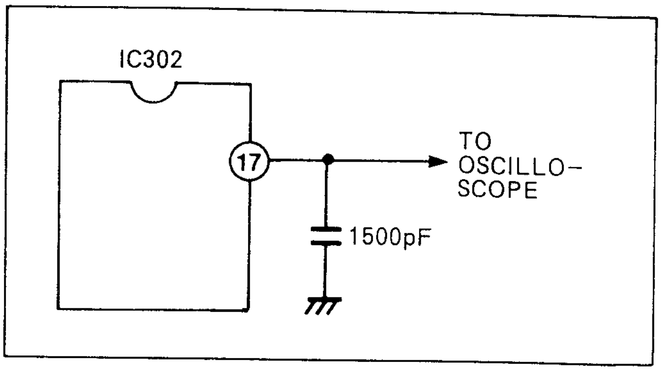

IC302
17
TO OSCILLO-SCOPE
1500pF

Fig. E4

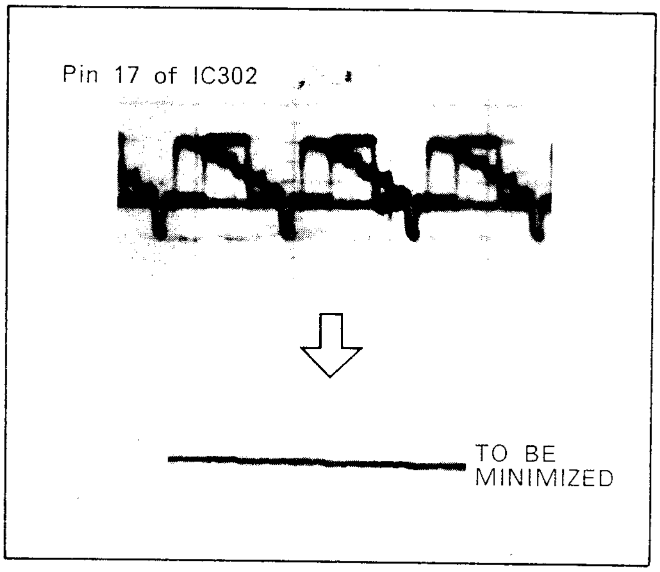

Pin 17 of IC302
TO BE MINIMIZED

Fig. E5

2-3-5. RECORDING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP507(HOT) TP508(GND)	VR501(Y) VR502(C)	RECORDING	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	Y:130+-5(mVp-p) C:32+-2(mVp-p)	

1. Record the colour bar.
2. Connect the oscilloscope to TP507(HOT) and TP508(GND).
3. Supply +5V DC to Pin 6 of Luminance & Chrominance Pack C.B.A. to reduce luminance component.
4. Adjust the VR502 until the amplitude of Cyan is 32+-2[mVp-p].
5. Adjust the VR501 until the amplitude of V.sync tip portion is 130+-5[mVp-p].

NOTE:
Before "Luminance Recording Current Adjustment", "Chrominance Recording Current Adjustment" must be completed.

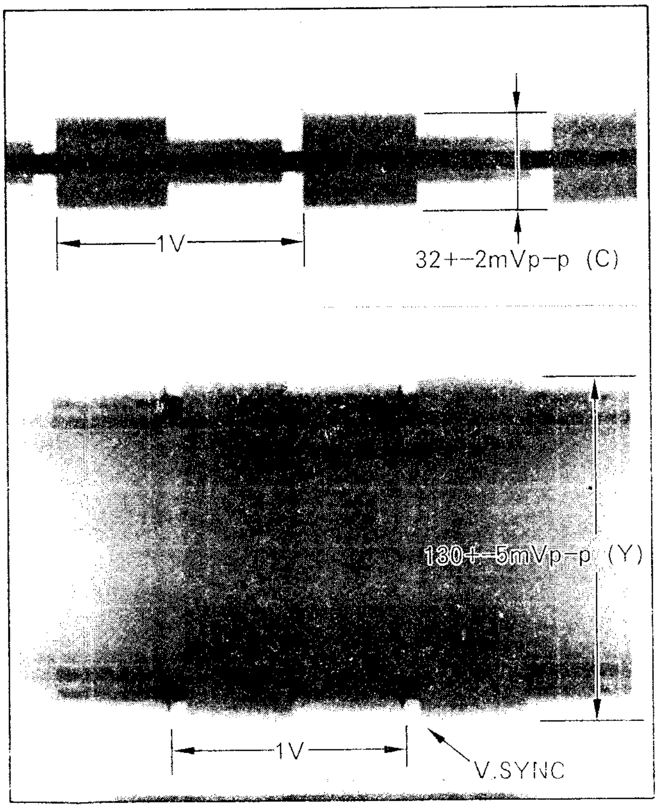
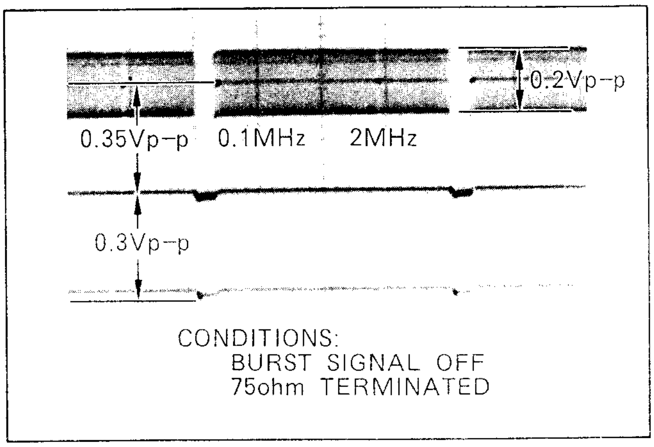


Fig. E6

2-3-6. VIDEO FREQUENCY RESPONSE ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3002	VR3012	(SELF RECORDED) PLAYBACK	VIDEO SWEEP SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE VIDEO SWEEP GENERATOR	0+-1(dB) (90~100%)	

Note:
Set the Video Sweep Signal as shown in Fig.E7.



CONDITIONS:
BURST SIGNAL OFF
75ohm TERMINATED

Fig. E7

1. Record the Video Sweep Signal for a few minutes and playback the just recorded portion.
2. Connect the oscilloscope to TP3002.
3. Adjust the VR3012 until the frequency response between [0.1MHz] and [2MHz] is 0+-1[dB]

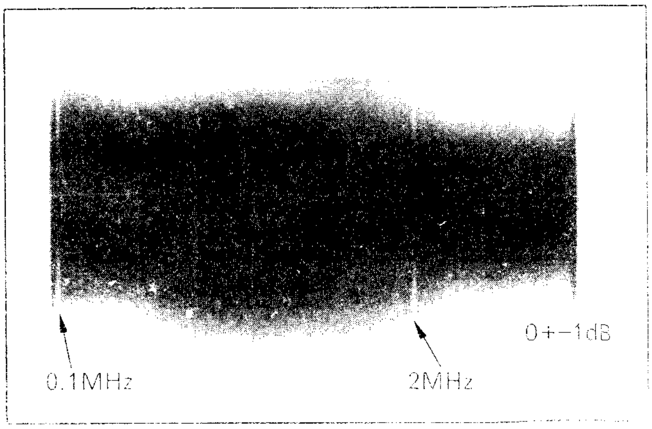


Fig. E8

AUDIO SECTION

2-3-7. BIAS CURRENT ADJUSTMENT

TP	**ADJ.**	**MODE**	**INPUT**
TP4002 (HOT) TP4003 (GND)	VR4002	RECORDING	
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	V.T.V.M.	3.0+-0.1(mVrms)	

1. Place the unit in recording mode.
2. Connect the V.T.V.M. to TP4002(HOT) and TP4003(GND).
3. Adjust VR4002 until the reading of V.T.V.M. is 3.0+-0.1[mVrms].

TIMER SECTION

2-3-8. TIMER REFERENCE CLOCK ADJUSTMENT

TP	**ADJ.**	**MODE**	**INPUT**
TP7501	C7501	STOP	
TAPE	**M. EQ.**	**SPEC.**	
	UNIVERSAL COUNTER	7812.5+-0.015(us)	

1. Connect the universal counter to TP7501.
2. Adjust C7501 until the reading of universal counter is 7812.5+-0.015[usec.].

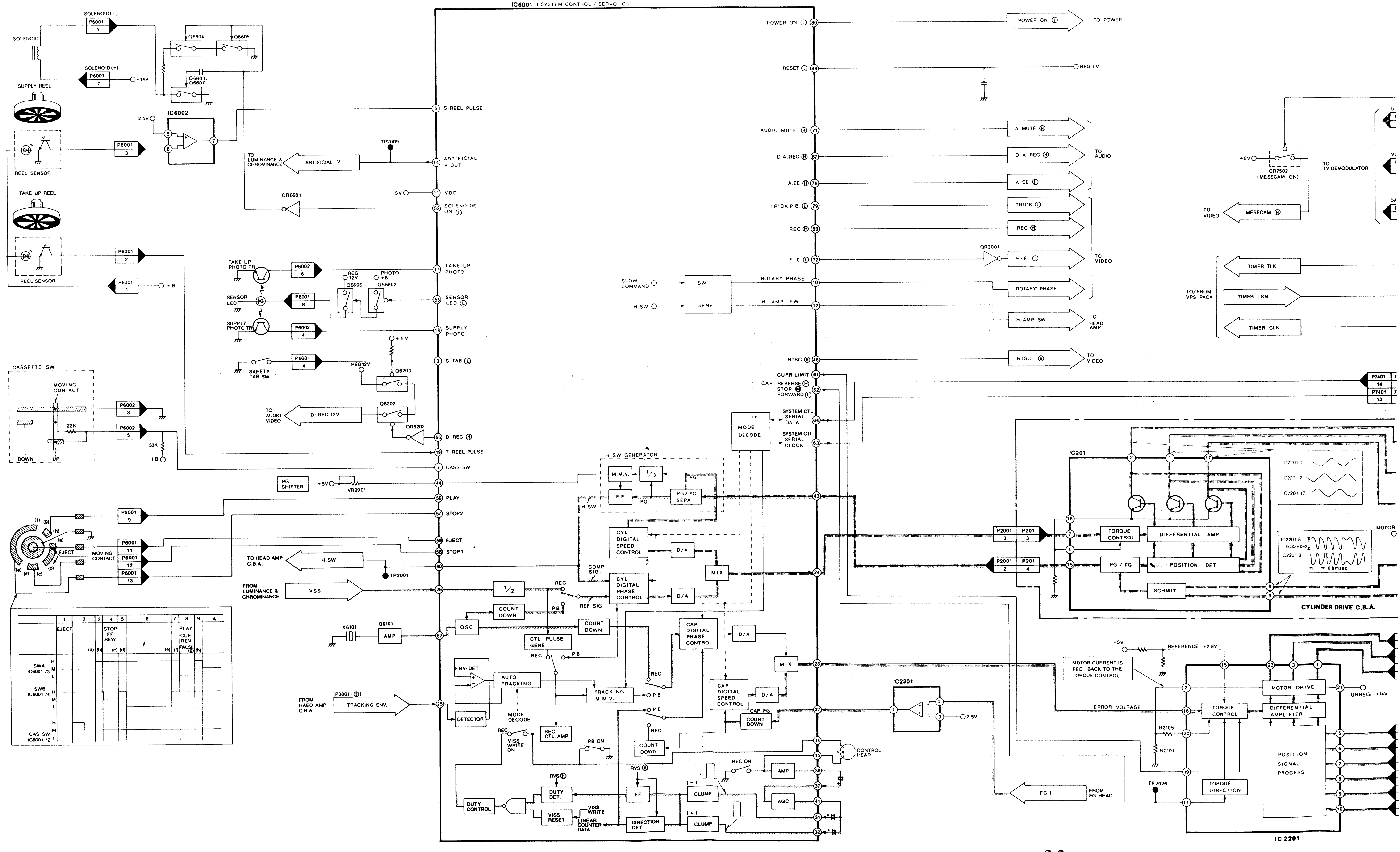
SECTION 3

BLOCK DIAGRAMS & SCHEMATIC DIAGRAMS

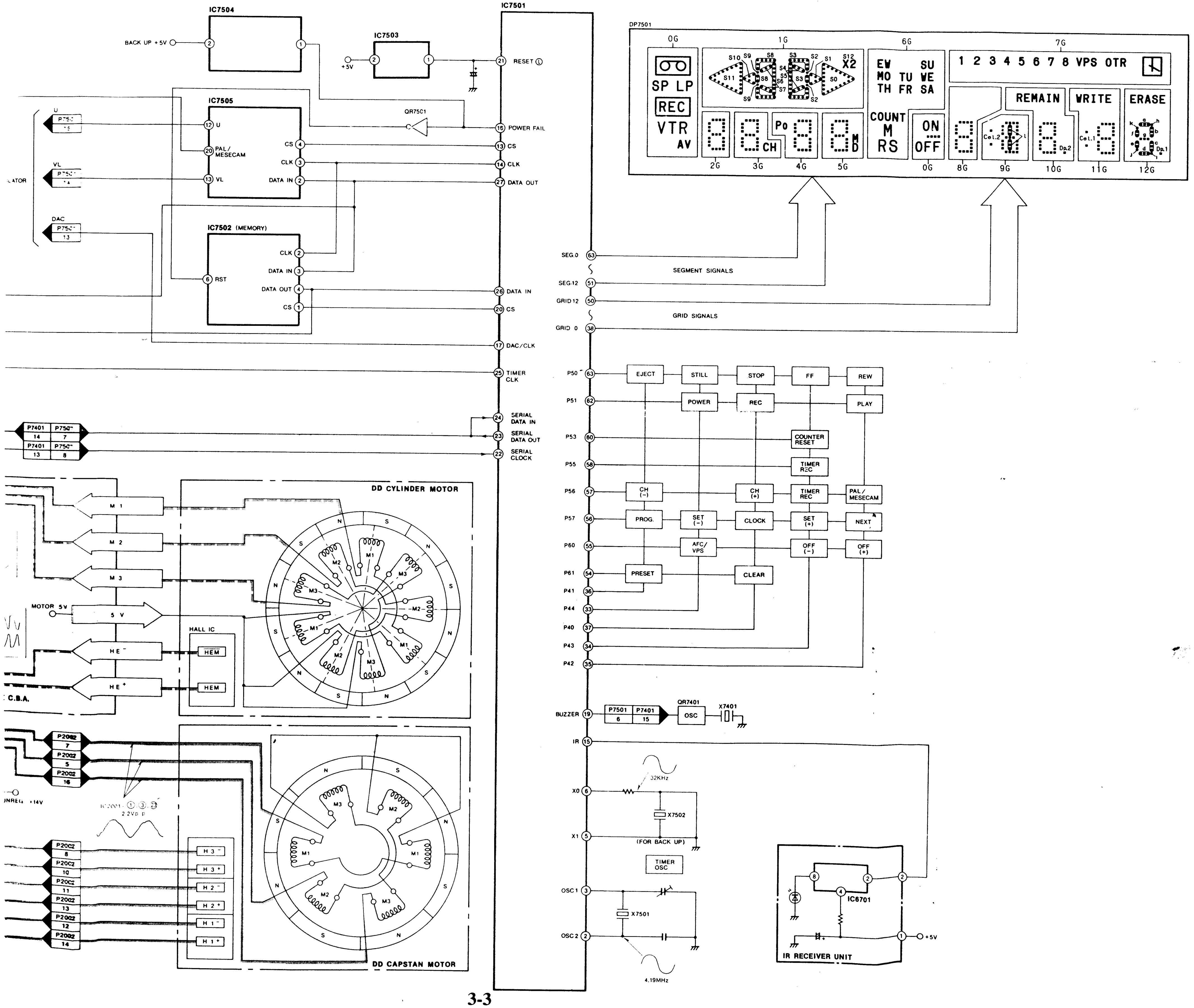
3-1. SYSTEM CONTROL & SERVO BLOCK DIAGRAM

CAPSTAN SERVO SPEED LOOP
▨ CAPSTAN SERVO PHASE LOOP

CYLINDER SERVO SPEED LOOP
▨ ▨ CYLINDER SERVO PHASE LOOP

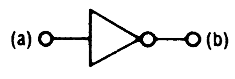


IC6001 (SYSTEM CONTROL / SERVO IC)
SOLENOID(-)
P6001 5
SOLENOID
SOLENOID(+)
P6001 7
+14V
Q6604
Q6605
Q6603, Q6607
SUPPLY REEL
IC6002
2.5V
P6001 3
REEL SENSOR
TAKE-UP REEL
P6001 2
REEL SENSOR
P6001 1
+B
S-REEL PULSE
TP2009
TO LUMINANCE & CHROMINANCE
ARTIFICIAL-V
ARTIFICIAL V OUT
5V
VDD
QR6601
SOLENOIDE ON Ⓛ
TAKE UP PHOTO TR
P6002 6
REG 12V
PHOTO +B
Q6606
QR6602
TAKE UP PHOTO
SENSOR LED
P6001 8
SENSOR LED Ⓛ
SUPPLY PHOTO TR
P6002 4
SUPPLY PHOTO
+5V
SAFETY TAB SW
P6001 4
REG12V
Q6203
S-TAB Ⓛ
TO AUDIO VIDEO
D-REC 12V
Q6202
QR6202
D-REC Ⓗ
T-REEL PULSE
CASSETTE SW
MOVING CONTACT
P6002 3
22K
P6002 5
33K
+B
DOWN
UP
CASS SW
PG SHIFTER
+5V
VR2001
PLAY
STOP2
EJECT
STOP1
P6001 9
(f) (g) (h) (a) (b) (c) (d) (e)
EJECT
MOVING CONTACT
P6001 11
P6001 12
P6001 13
1 2 3 4 5 6 7 8 9 A
EJECT
STOP FF REW
PLAY CUE REV PAUSE
(a) (b) (c) (d) (e) (f) (g) (h)
SWA IC6001-73 H M L
SWB IC6001-74 H M L
CAS SW IC6001-72 H M L
TO HEAD AMP C.B.A.
H.SW
TP2001
FROM LUMINANCE & CHROMINANCE
VSS
X6101
Q6101
AMP
FROM HAED AMP C.B.A.
(P3001-⑤)
TRACKING ENV.
H. SW GENERATOR
M.M.V.
1/3
FG
FF
PG
PG/FG SEPA
H. SW
CYL DIGITAL SPEED CONTROL
D/A
MIX
COMP. SIG.
CYL DIGITAL PHASE CONTROL
1/2
REC
REF. SIG
P.B.
COUNT DOWN
OSC
COUNT DOWN
CTL PULSE GENE.
ENV. DET
AUTO TRACKING
DETECTOR
MODE DECODE
TRACKING M.M.V.
REC CTL. AMP
VISS WRITE ON
PB ON
CAP DIGITAL PHASE CONTROL
CAP DIGITAL SPEED CONTROL
CAP FG
COUNT DOWN
RVS Ⓗ
DUTY DET.
DUTY CONTROL
VISS RESET
VISS WRITE
LINEAR COUNTER DATA
FF
DIRECTION DET
(-) CLUMP
(+) CLUMP
REC ON
AMP
AGC
CONTROL HEAD
MODE DECODE
SYSTEM CTL. SERIAL DATA
SYSTEM CTL. SERIAL CLOCK
POWER ON Ⓛ
TO POWER
RESET Ⓛ
REG 5V
AUDIO MUTE Ⓗ
A. MUTE Ⓗ
D.A.REC Ⓗ
D. A. REC Ⓗ
A.EE Ⓗ
A. EE Ⓗ
TO AUDIO
TRICK P.B. Ⓛ
TRICK Ⓛ
REC Ⓗ
QR3001
E-E Ⓛ
TO VIDEO
SLOW COMMAND
H.SW
SW GENE
ROTARY PHASE
H. AMP SW
TO HEAD AMP
NTSC Ⓗ
TO VIDEO
CURR LIMIT
CAP REVERSE Ⓗ STOP Ⓜ FORWARD Ⓛ
+5V
QR7502 (MESECAM : ON)
TO TV DEMODULATOR
TO VIDEO
MESECAM Ⓗ
TO/FROM VPS PACK
TIMER TLK
TIMER LSN
TIMER CLK
P7401 14
P7401 13
IC201
IC2201-1
IC2201-2
IC2201-17
P2001 3
P201 3
P2001 2
P201 4
TORQUE CONTROL
DIFFERENTIAL AMP
PG / FG
POSITION DET
SCHMIT
MOTOR
IC2201-8 0.35Vp-p
IC2201-9
0.8msec
CYLINDER DRIVE C.B.A.
IC2301
2.5V
FG 1
FROM FG HEAD
+5V
REFERENCE +2.8V
MOTOR CURRENT IS FED BACK TO THE TORQUE CONTROL
ERROR VOLTAGE
R2105
R2104
TP2026
MOTOR DRIVE
UNREG +14V
TORQUE CONTROL
DIFFERENTIAL AMPLIFIER
TORQUE DIRECTION
POSITION SIGNAL PROCESS
IC 2201


IC7504
BACK UP +5V
IC7503
+5V
IC7501
RESET
IC7505
QR7501
U
PAL/MESECAM
VL
CS
CLK
DATA IN
POWER FAIL
DATA OUT
DAC
IC7502 (MEMORY)
RST
DATA OUT
DATA IN
DAC/CLK
TIMER CLK
SERIAL DATA IN
SERIAL DATA OUT
SERIAL CLOCK
P7401
14
13
7
8
DD CYLINDER MOTOR
M 1
M 2
M 3
MOTOR 5V
5 V
HALL IC
HEM
HE-
HE+
C.B.A.
P2002
7
5
16
UNREG +14V
2.2Vp-p
P2002
8
10
11
13
12
14
H 3-
H 3+
H 2-
H 2+
H 1-
H 1+
DD CAPSTAN MOTOR
N
S
M1
M2
M3
DP7501
0G
1G
6G
7G
SP LP
REC
VTR
AV
S10 S9 S8 S3 S2 S1 S12
X2
S11 S6 S5 S4 S7 S0
EW SU
MO TU WE
TH FR SA
1 2 3 4 5 6 7 8 VPS OTR
COUNT
M
RS
ON
OFF
REMAIN
WRITE
ERASE
Po
CH
Col.2
Col.1
Dp.2
Dp.1
2G
3G
4G
5G
8G
9G
10G
11G
12G
SEG.0
SEG.12
GRID 12
GRID 0
SEGMENT SIGNALS
GRID SIGNALS
P50
P51
P53
P55
P56
P57
P60
P61
P41
P44
P40
P43
P42
EJECT
STILL
STOP
FF
REW
POWER
REC
PLAY
COUNTER RESET
TIMER REC
CH (-)
CH (+)
TIMER REC
PAL/MESECAM
PROG.
SET (-)
CLOCK
SET (+)
NEXT
AFC/VPS
OFF (-)
OFF (+)
PRESET
CLEAR
BUZZER
P7501
P7401
6
15
QR7401
OSC
X7401
IR
X0
X1
32KHz
X7502
(FOR BACK UP)
TIMER OSC
OSC 1
OSC 2
X7501
4.19MHz
IR RECEIVER UNIT
IC6701
+5V

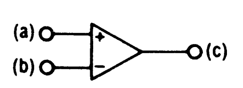
SYMBOL	TRUTH VALUE TABLE

INVERTER



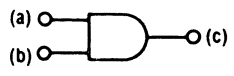
IN	(a)	H	L
OUT	(b)	L	H

COMPARTOR



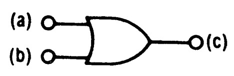
IN	(a) (b)	(a) > (b)	(a) < (b)
OUT	(c)	H	L

AND CIRCUIT



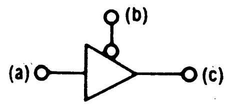
IN	(a)	L	L	H	H
	(b)	L	H	L	H
OUT	(c)	L	L	L	H

OR CIRCUIT



IN	(a)	L	L	H	H
	(b)	L	H	L	H
OUT	(c)	L	H	H	H

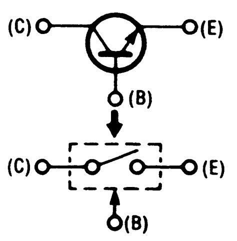
THREE STATES BUFFER



IN	(a)	H	L	H or L
	(b)	L	L	H
OUT	(c)	H	L	※

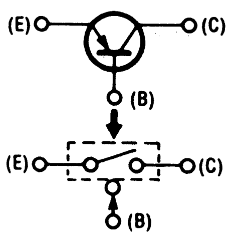
※ High Impedance

TR. SW (NPN TYPE)



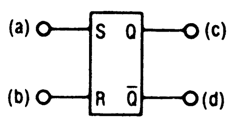
BASE	H	L
TR. SW	ON	OFF

TR. SW (PNP TYPE)



BASE	H	L
TR. SW	OFF	ON

R-S TYPE FLIP-FLOP

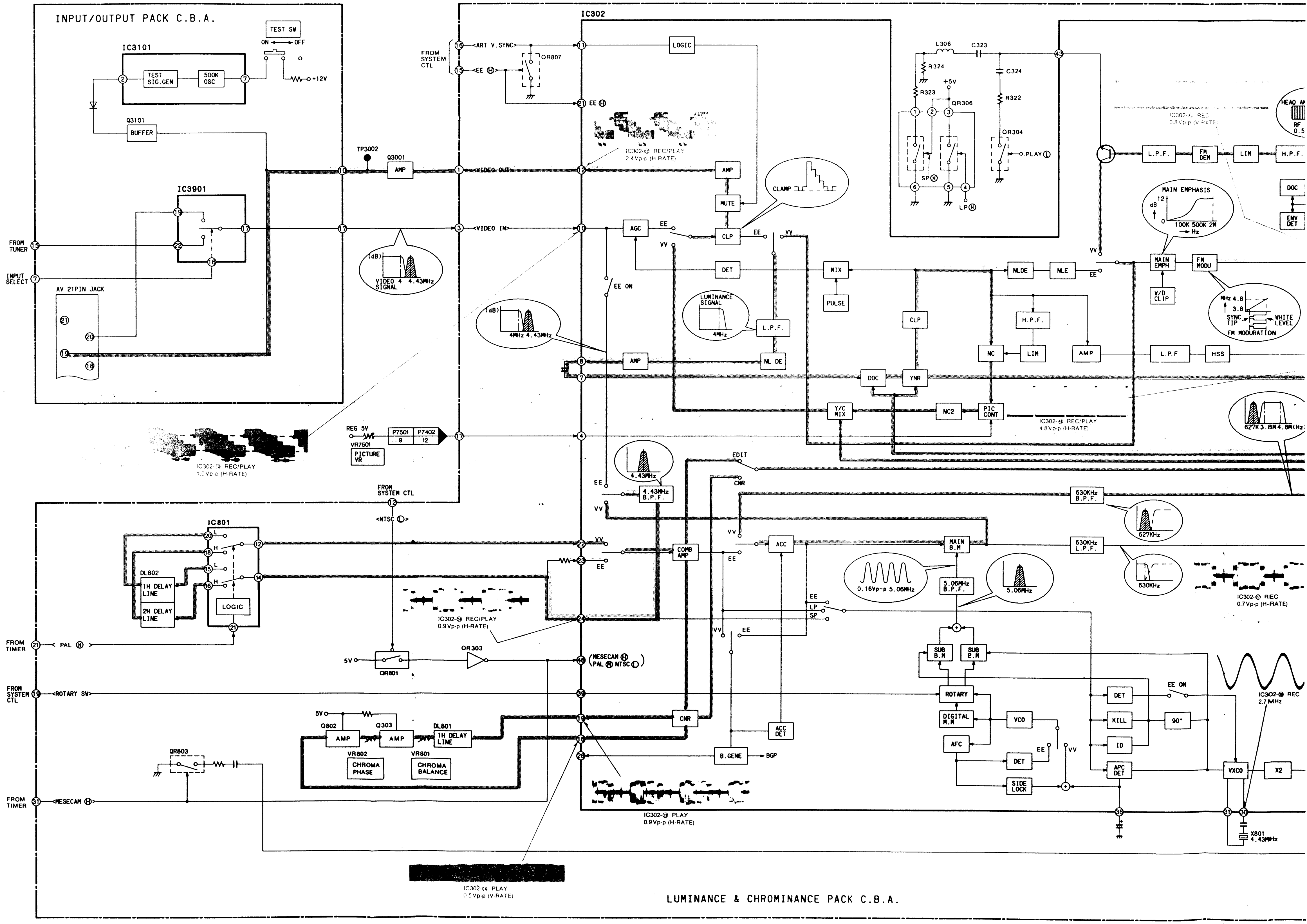


IN	(a)	L	L	⎍
	(b)	L	⎍	L
OUT	(c)	※	L	H
	(d)	◆	H	L

※ Initial condition is maintained.
◆ Initial condition is reversed.

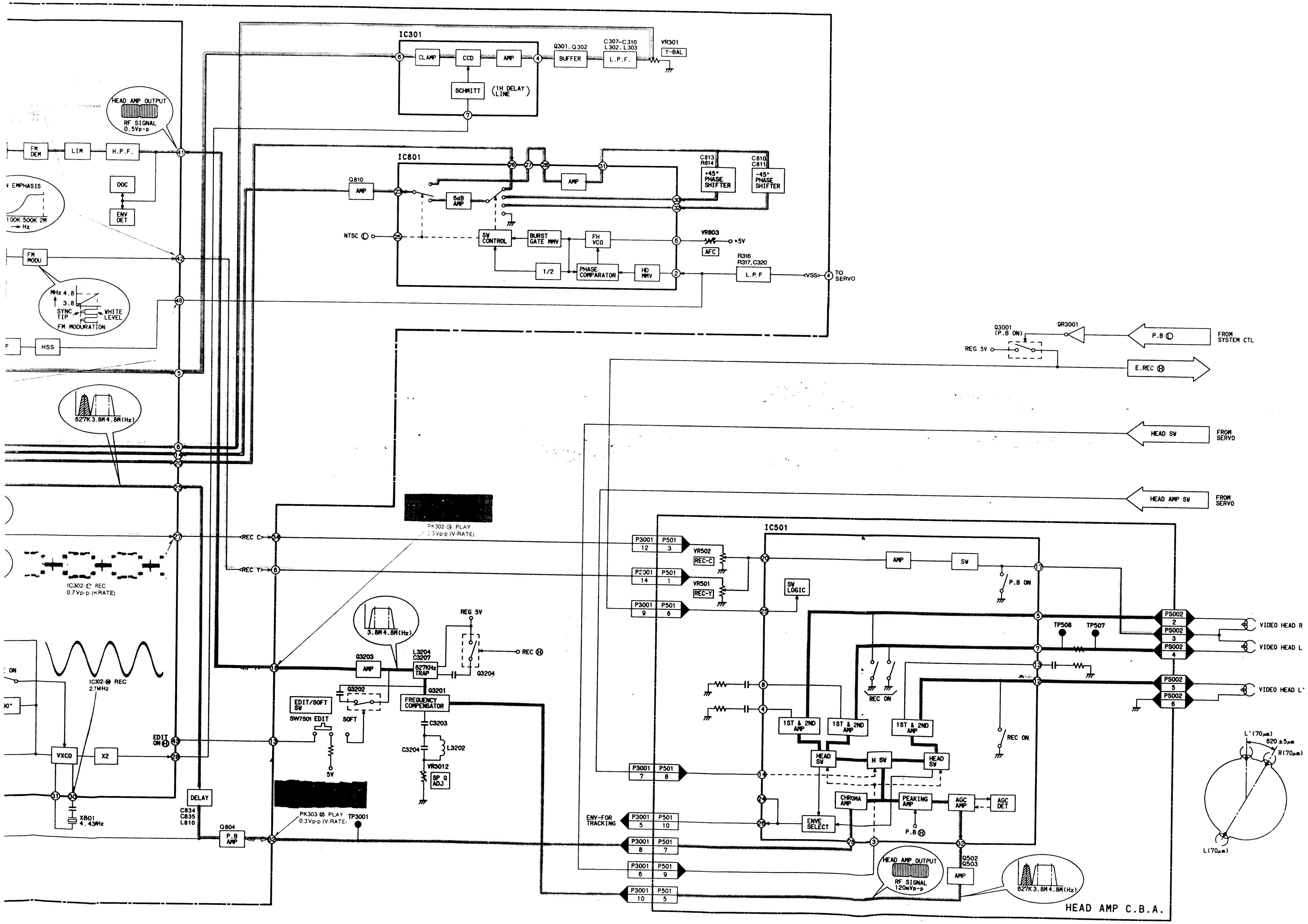
3-2. LUMINANCE & CHROMINANCE BLOCK DIAGRAM

MAIN SIGNAL PATH IN REC MODE — MAIN SIGNAL PATH IN PLAYBACK MODE

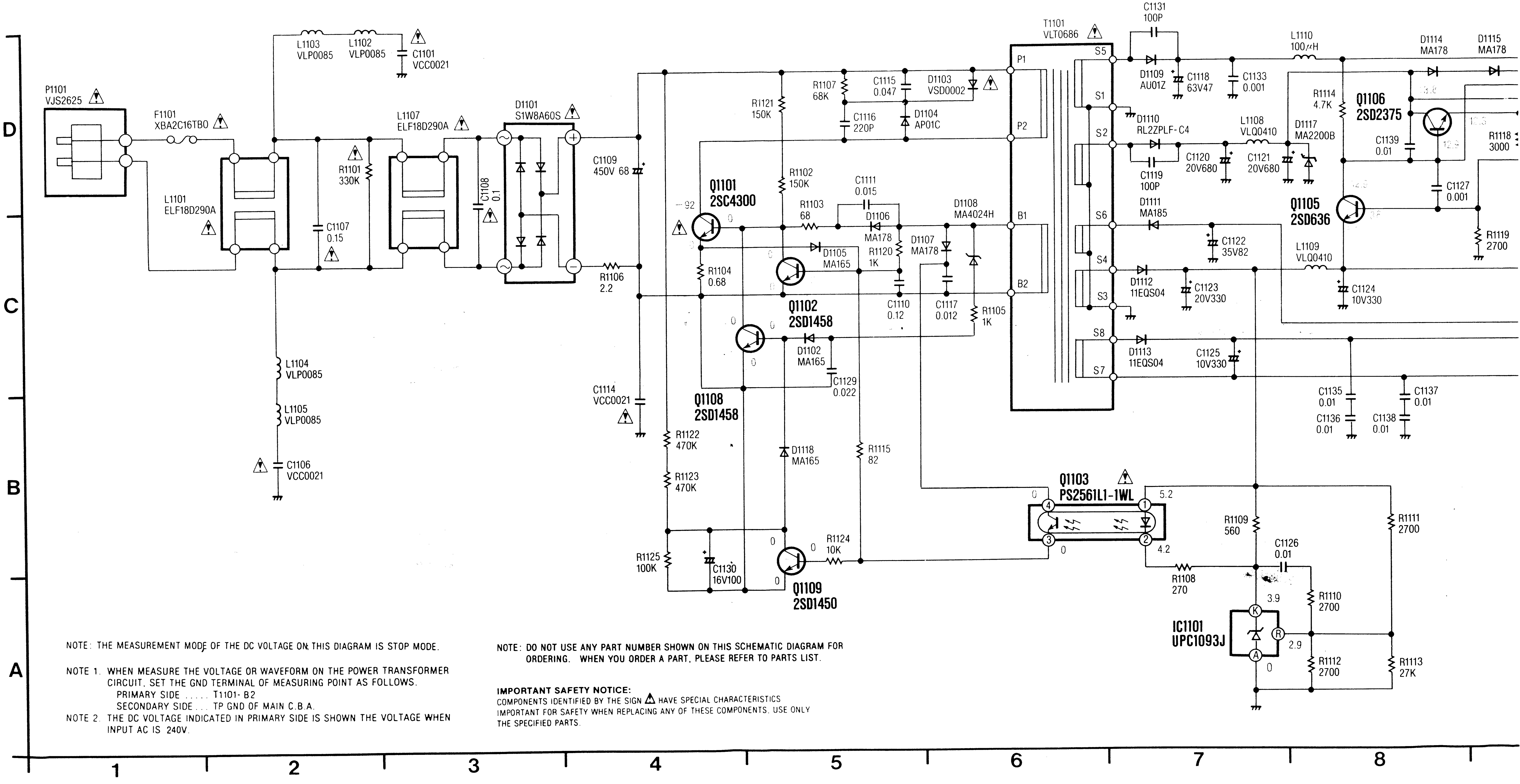

INPUT/OUTPUT PACK C.B.A.
IC3101
TEST SIG.GEN
500K OSC
TEST SW
ON OFF
+12V
Q3101
BUFFER
IC3901
FROM TUNER
INPUT SELECT
AV 21PIN JACK
TP3002
Q3001
AMP
FROM SYSTEM CTL
<ART V.SYNC>
<EE Ⓗ>
QR807
<VIDEO OUT>
<VIDEO IN>
(dB) VIDEO 4 4.43MHz SIGNAL
IC302
LOGIC
EE Ⓗ
IC302-⑫ REC/PLAY 2.4Vp-p (H-RATE)
AMP
MUTE
CLAMP
CLP
AGC
EE
VV
YY
DET
MIX
PULSE
EE ON
(dB) 4MHz 4.43MHz
LUMINANCE SIGNAL 4MHz
L.P.F.
AMP
NL DE
REG 5V
VR7501
PICTURE VR
P7501 P7402 9 12
IC302-③ REC/PLAY 1.0Vp-p (H-RATE)
L306 C323
R324 R323
+5V
QR306
C324
R322
QR304
PLAY Ⓛ
SP Ⓗ
LP Ⓗ
HEAD AMP
IC302-④ REC 0.8Vp-p (V-RATE)
L.P.F.
FM DEM
LIM
H.P.F.
DOC
ENV DET
MAIN EMPHASIS dB 12 0 100K 500K 2M Hz
MAIN EMPH
FM MODU
V/D CLIP
MHz 4.8 3.8 SYNC TIP WHITE LEVEL FM MODURATION
NLDE
NLE
CLP
H.P.F.
NC
LIM
AMP
L.P.F
HSS
DOC
YNR
Y/C MIX
NC2
PIC CONT
IC302-⑭ REC/PLAY 4.8Vp-p (H-RATE)
627K 3.8M 4.8M (Hz)
EDIT
CNR
4.43MHz
4.43MHz B.P.F.
FROM SYSTEM CTL
<NTSC Ⓛ>
IC801
DL802
1H DELAY LINE
2H DELAY LINE
LOGIC
COMB AMP
ACC
MAIN B.M
630KHz B.P.F.
627KHz
630KHz L.P.F.
630KHz
IC302-⑰ REC 0.7Vp-p (H-RATE)
IC302-⑩ REC/PLAY 0.9Vp-p (H-RATE)
0.16Vp-p 5.06MHz
5.06MHz B.P.F.
5.06MHz
LP SP
FROM TIMER
< PAL Ⓗ >
5V
QR801
QR303
(MESECAM Ⓗ PAL Ⓗ NTSC Ⓛ)
SUB B.M
ROTARY
DIGITAL M.M
VCO
AFC
DET
SIDE LOCK
EE ON
KILL
ID
APC DET
90°
VXCO
X2
IC302-⑩ REC 2.7MHz
X801 4.43MHz
FROM SYSTEM CTL
<ROTARY SW>
5V
Q802
Q303
AMP
DL801
1H DELAY LINE
VR802 CHROMA PHASE
VR801 CHROMA BALANCE
QR803
CNR
ACC DET
B.GENE
BGP
FROM TIMER
<MESECAM Ⓗ>
IC302-⑯ PLAY 0.9Vp-p (H-RATE)
IC302-⑯ PLAY 0.5Vp-p (V-RATE)
LUMINANCE & CHROMINANCE PACK C.B.A.

Back Page:
SYSTEM CONTROL & SERVO Section

ACK MODE


IC301
CLAMP
CCD
AMP
SCHMITT
(1H DELAY LINE)
Q301, Q302
BUFFER
C307~C310
L302, L303
L.P.F.
VR301
Y-BAL
HEAD AMP OUTPUT
RF SIGNAL
0.5Vp-p
FM DEM
LIM
H.P.F.
DOC
ENV DET
EMPHASIS
100K 500K 2M
→ Hz
FM MODU
MHz 4.8
3.8
SYNC TIP
WHITE LEVEL
FM MODURATION
HSS
IC801
Q810
AMP
6dB AMP
SW CONTROL
BURST GATE MMV
FH VCO
1/2
PHASE COMPARATOR
HD MMV
NTSC Ⓛ
C813
R814
+45° PHASE SHIFTER
C810
C811
-45° PHASE SHIFTER
VR803
+5V
AFC
R316
R317, C320
L.P.F
<VSS>
TO SERVO
Q3001
(P.B ON)
QR3001
REG 5V
P.B Ⓛ
FROM SYSTEM CTL
E.REC Ⓗ
HEAD SW
FROM SERVO
HEAD AMP SW
FROM SERVO
627K 3.8M 4.8M(Hz)
<REC C>
<REC Y>
PK302-⑱ PLAY
3Vp-p (V-RATE)
IC302-㉗ REC
0.7Vp-p (H-RATE)
IC302-㉚ REC
2.7MHz
ON
VXCO
X2
X801
4.43MHz
EDIT ON Ⓗ
DELAY
C834
C835
L810
Q804
P.B AMP
<RF C>
<RF Y>
PK303-㉜ PLAY
0.3Vp-p (V-RATE)
TP3001
3.8M 4.8M(Hz)
Q3203
AMP
L3204
C3207
627KHz TRAP
REG 5V
REC Ⓗ
Q3204
Q3202
Q3201
FREQUENCY COMPENSATOR
EDIT/SOFT SW
SW7501 EDIT
SOFT
5V
C3203
C3204
L3202
VR3012
SP Q ADJ
IC501
P3001
P501
VR502
REC-C
VR501
REC-Y
SW LOGIC
AMP
SW
P.B ON
TP508
TP507
REC ON
1ST & 2ND AMP
HEAD SW
H SW
CHROMA AMP
PEAKING AMP
AGC AMP
AGC DET
ENVE SELECT
P.B Ⓗ
ENV-FOR TRACKING
HEAD AMP OUTPUT
RF SIGNAL
120mVp-p
Q502
Q503
AMP
627K 3.8M 4.8M(Hz)
PS002
VIDEO HEAD R
VIDEO HEAD L
VIDEO HEAD L'
L'(70μm)
620 ± 5μm
R(70μm)
L(70μm)
HEAD AMP C.B.A.

3-3. POWER SCHEMATIC DIAGRAM


P1101
VJS2625
F1101
XBA2C16TBO
L1101
ELF18D290A
L1103
VLP0085
L1102
VLP0085
C1101
VCC0021
R1101
330K
C1107
0.15
L1107
ELF18D290A
C1108
0.1
D1101
S1W8A60S
C1109
450V 68
R1106
2.2
L1104
VLP0085
L1105
VLP0085
C1106
VCC0021
C1114
VCC0021
R1121
150K
R1102
150K
R1107
68K
C1115
0.047
C1116
220P
D1103
VSD0002
D1104
AP01C
Q1101
2SC4300
-92
R1103
68
C1111
0.015
D1106
MA178
D1108
MA4024H
R1104
0.68
D1105
MA165
R1120
1K
D1107
MA178
Q1102
2SD1458
C1110
0.12
C1117
0.012
R1105
1K
D1102
MA165
C1129
0.022
Q1108
2SD1458
R1122
470K
R1123
470K
D1118
MA165
R1115
82
R1125
100K
C1130
16V100
R1124
10K
Q1109
2SD1450
T1101
VLT0686
P1
P2
B1
B2
S1
S2
S3
S4
S5
S6
S7
S8
C1131
100P
D1109
AU01Z
C1118
63V47
C1133
0.001
D1110
RL2ZPLF-C4
C1119
100P
C1120
20V680
L1108
VLQ0410
C1121
20V680
D1111
MA185
C1122
35V82
D1112
11EQS04
C1123
20V330
D1113
11EQS04
C1125
10V330
L1110
100μH
R1114
4.7K
D1117
MA2200B
Q1106
2SD2375
C1139
0.01
C1127
0.001
R1118
3000
Q1105
2SD636
R1119
2700
L1109
VLQ0410
C1124
10V330
D1114
MA178
D1115
MA178
C1135
0.01
C1136
0.01
C1137
0.01
C1138
0.01
Q1103
PS2561L1-1WL
5.2
4.2
R1109
560
R1111
2700
C1126
0.01
R1108
270
R1110
2700
3.9
IC1101
UPC1093J
K
R
A
2.9
R1112
2700
R1113
27K
D
C
B
A
1
2
3
4
5
6
7
8

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

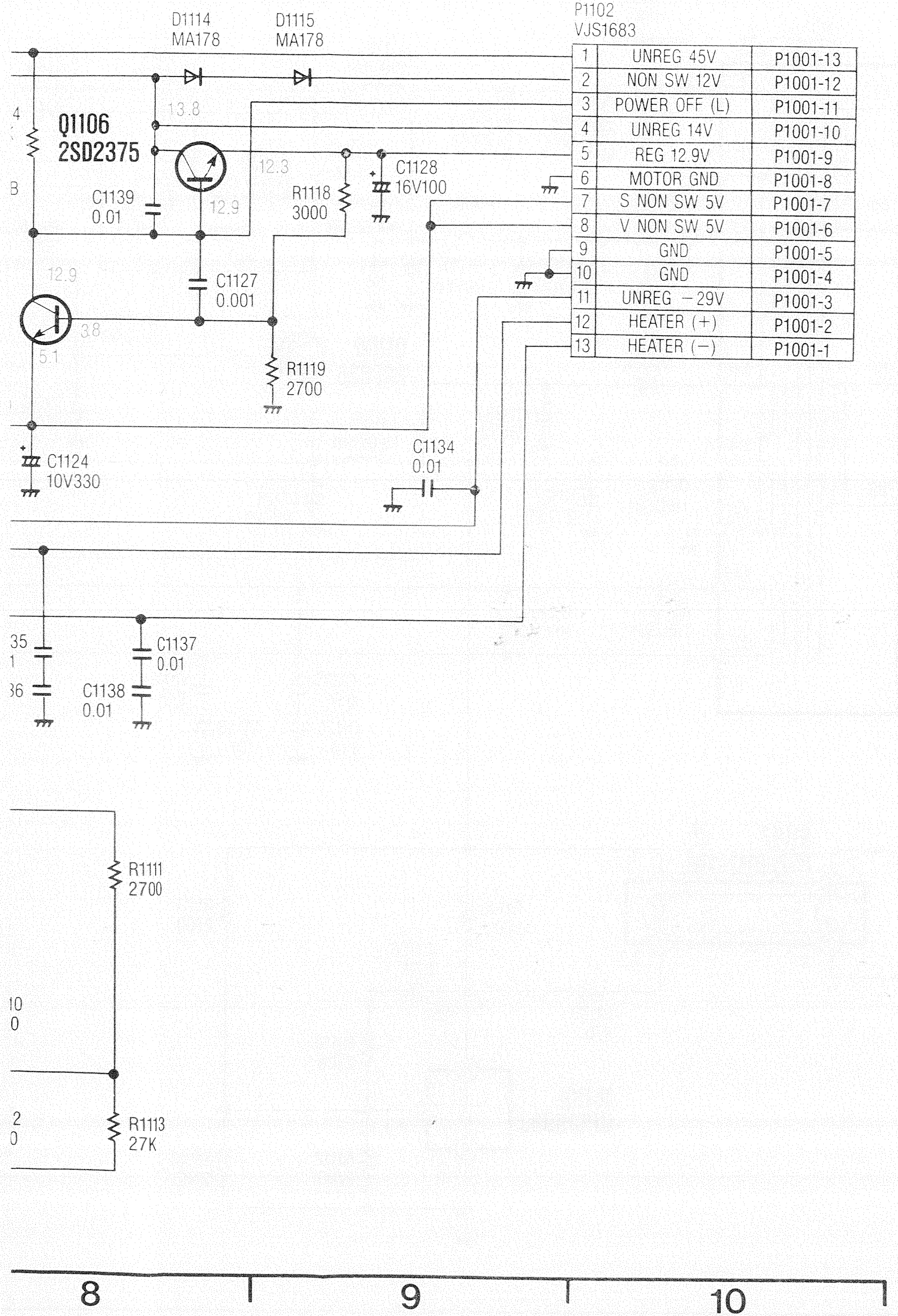
NOTE 1. WHEN MEASURE THE VOLTAGE OR WAVEFORM ON THE POWER TRANSFORMER CIRCUIT, SET THE GND TERMINAL OF MEASURING POINT AS FOLLOWS.
PRIMARY SIDE T1101- B2
SECONDARY SIDE ... TP GND OF MAIN C.B.A.

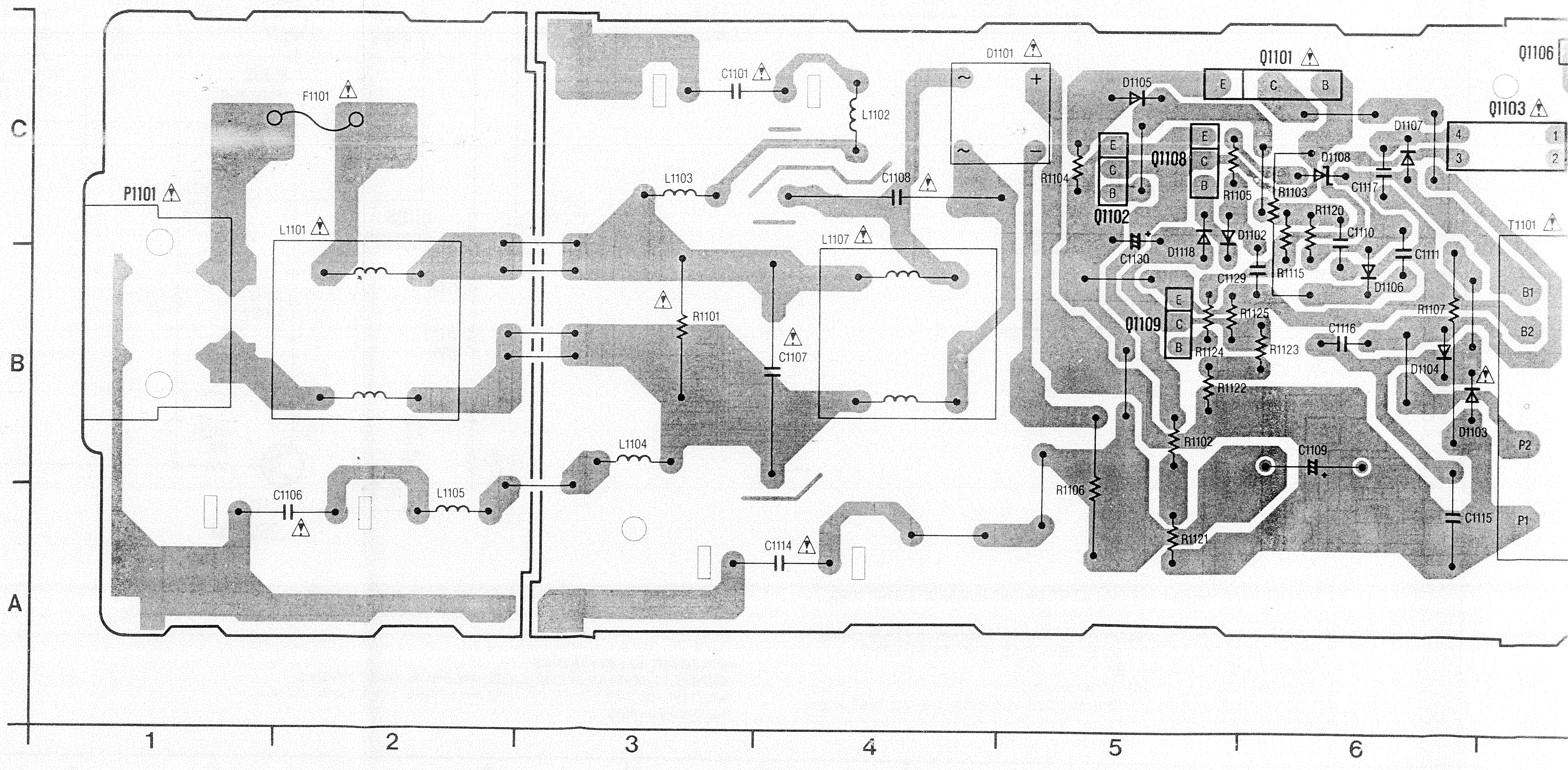
NOTE 2. THE DC VOLTAGE INDICATED IN PRIMARY SIDE IS SHOWN THE VOLTAGE WHEN INPUT AC IS 240V.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY WHEN REPLACING ANY OF THESE COMPONENTS. USE ONLY THE SPECIFIED PARTS.

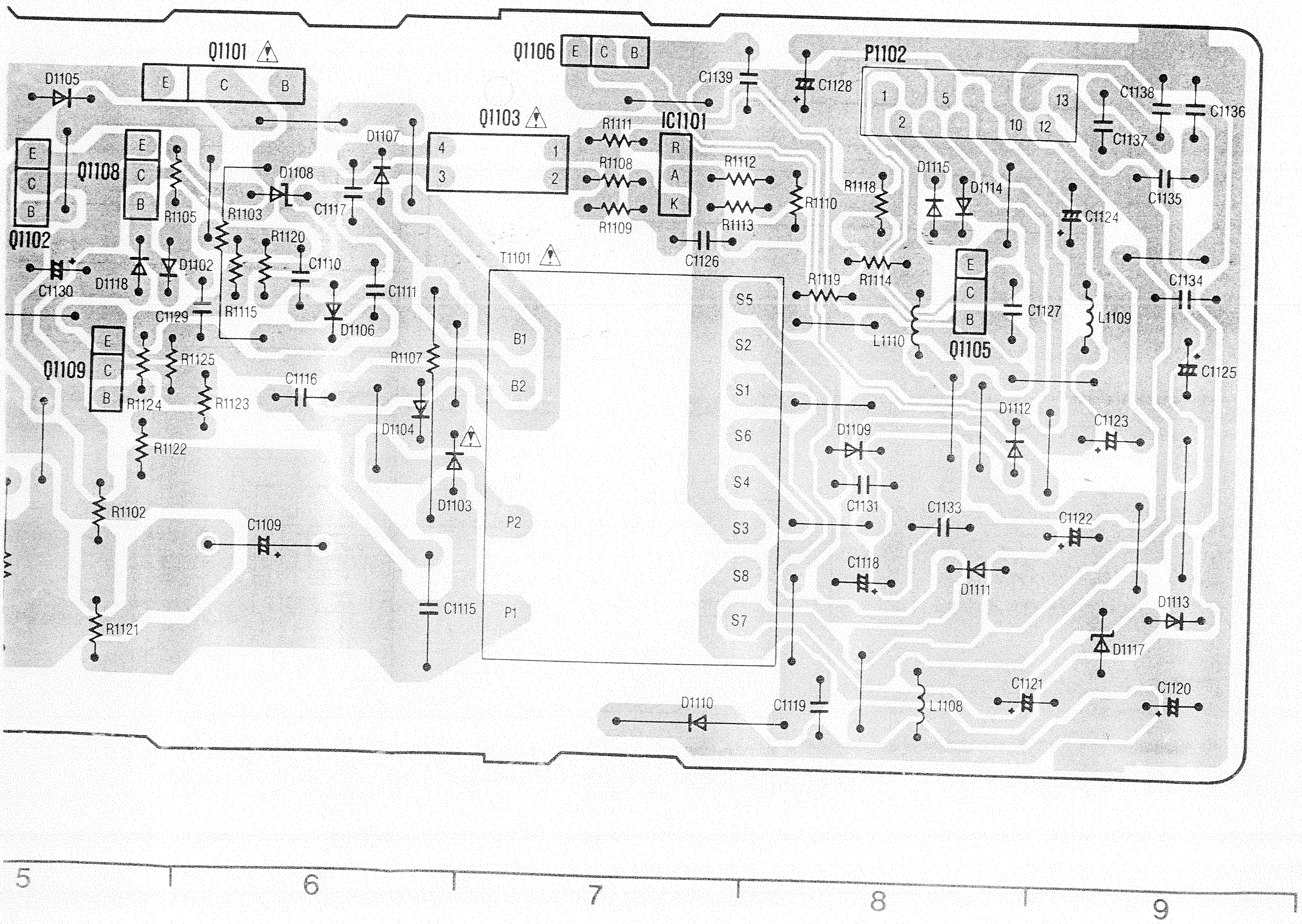
3-4. POWER C.B.A. (VEP01518D)


D1114
MA178
D1115
MA178
P1102
VJS1683
1 UNREG 45V P1001-13
2 NON SW 12V P1001-12
3 POWER OFF (L) P1001-11
4 UNREG 14V P1001-10
5 REG 12.9V P1001-9
6 MOTOR GND P1001-8
7 S NON SW 5V P1001-7
8 V NON SW 5V P1001-6
9 GND P1001-5
10 GND P1001-4
11 UNREG −29V P1001-3
12 HEATER (+) P1001-2
13 HEATER (−) P1001-1
Q1106
2SD2375
13.8
12.3
12.9
C1128
16V100
C1139
0.01
R1118
3000
C1127
0.001
12.9
3.8
5.1
R1119
2700
C1124
10V330
C1134
0.01
C1137
0.01
C1138
0.01
R1111
2700
R1113
27K
8
9
10


C
B
A
P1101
F1101
L1101
C1106
L1105
C1101
L1102
L1103
C1108
L1107
R1101
C1107
L1104
C1114
D1101
Q1101
E C B
D1105
Q1108
Q1102
R1104
R1105
R1103
D1107
D1108
C1117
Q1106
Q1103
T1101
C1130
D1118
D1102
C1129
R1120
C1110
C1111
R1115
D1106
Q1109
R1125
R1124
R1123
C1116
R1107
D1104
R1122
R1102
C1109
D1103
R1106
R1121
C1115
B1
B2
P2
P1
1
2
3
4
5
6

POWER C.B.A.	
Transistor	
Q1101	C-6
Q1102	C-5
Q1103	C-7
Q1105	C-8
Q1106	C-7
Q1108	C-5
Q1109	B-5
Integrated Circuit	
IC1101	C-7
Connector	
P1101	C-1
P1102	C-8

ADDRESS INFORMATION


Q1101
E
C
B
Q1106
E
C
B
C1139
C1128
P1102
1
5
13
2
10
12
C1138
C1136
C1137
D1105
Q1108
E
C
B
Q1102
R1105
R1103
D1108
D1107
C1117
Q1103
4
3
1
2
R1111
R1108
R1109
IC1101
R
A
K
R1112
R1113
R1110
R1118
D1115
D1114
C1124
C1135
C1130
D1118
D1102
R1120
C1110
C1111
R1115
C1129
T1101
C1126
R1119
R1114
E
C
B
Q1105
L1110
C1127
L1109
C1134
C1125
Q1109
E
C
B
R1125
R1124
R1123
C1116
R1107
D1106
D1104
D1103
R1122
R1102
C1109
R1121
B1
B2
P2
P1
S5
S2
S1
S6
S4
S3
S8
S7
D1112
C1123
D1109
C1131
C1133
C1122
C1118
D1111
D1113
D1117
C1115
D1110
C1119
L1108
C1121
C1120
5
6
7
8
9

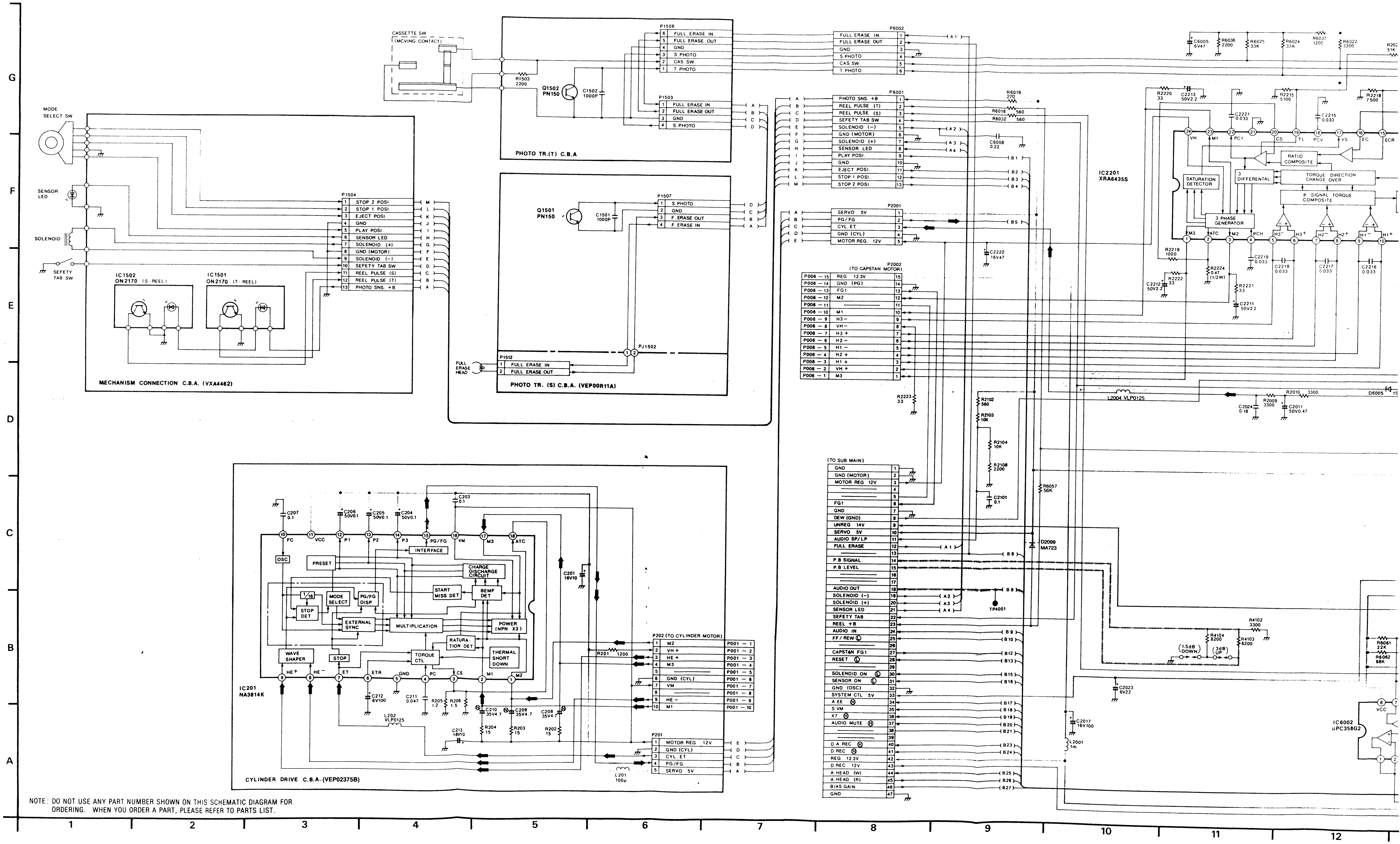
Next Page:
SYSTEM CONTROL & SERVO Section

3-5. SYSTEM CONTROL & SERVO SCHEMATIC DIAGRAM

CAPSTAN SERVO SPEED LOOP
CAPSTAN SERVO PHASE LOOP

AUDIO MAIN SIGNAL PATH IN REC MODE
AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

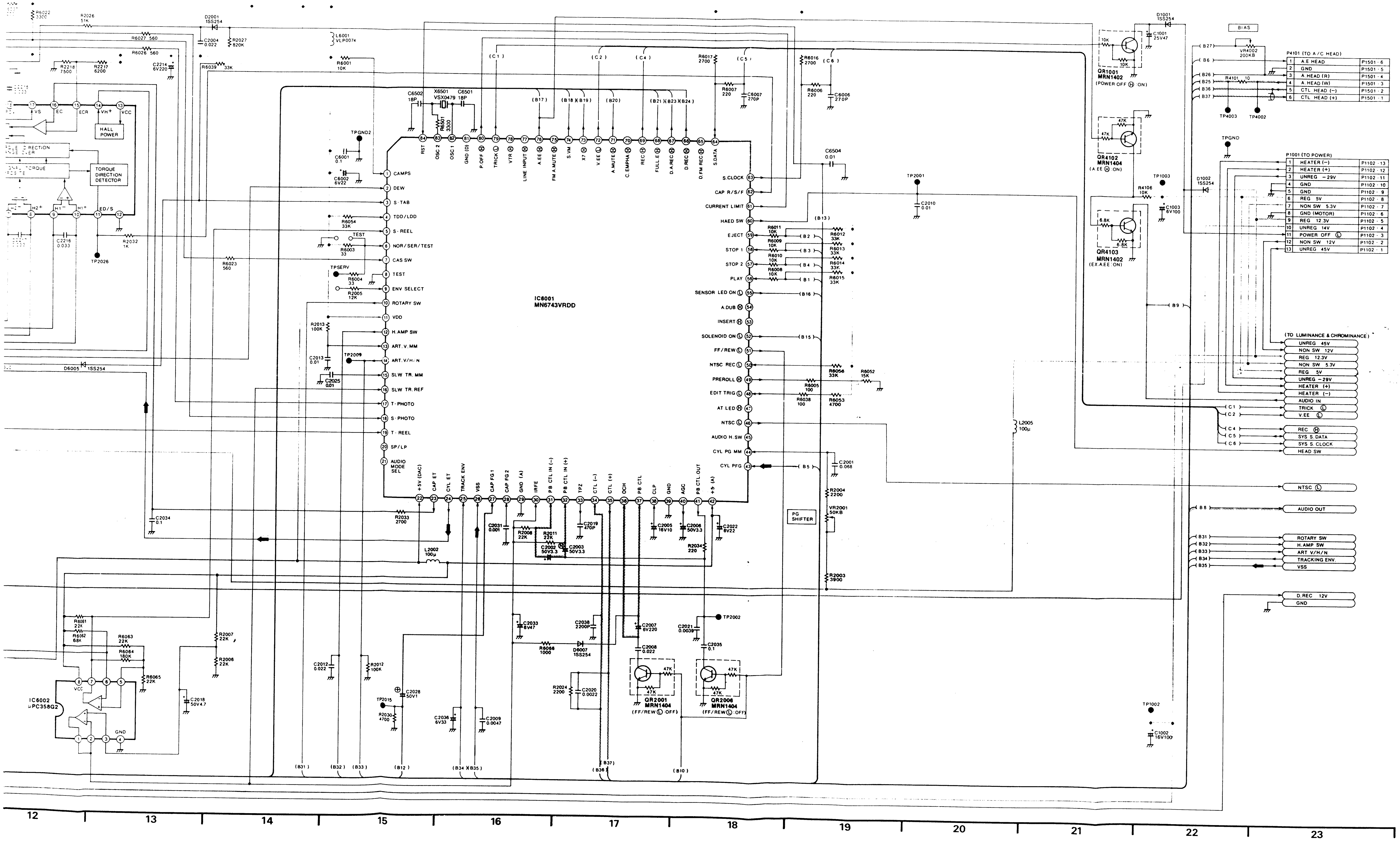
CYLINDER SER
CYLINDER SER



MODE SELECT SW
SENSOR LED
SOLENOID
SEFETY TAB SW
CASSETTE SW (MOVING CONTACT)
Q1502 PN150
C1502 1000P
R1503 2200
P1508
FULL ERASE IN
FULL ERASE OUT
GND
S.PHOTO
CAS.SW
T.PHOTO
P1503
PHOTO TR.(T) C.B.A
Q1501 PN150
C1501 1000P
P1507
F.ERASE OUT
F.ERASE IN
PJ1502
P1512
FULL ERASE HEAD
PHOTO TR. (S) C.B.A. (VEP00R11A)
P1504
STOP 2 POSI.
STOP 1 POSI.
EJECT POSI.
PLAY POSI.
SENSOR LED
SOLENOID (+)
GND (MOTOR)
SOLENOID (−)
SEFETY TAB SW
REEL PULSE (S)
REEL PULSE (T)
PHOTO SNS. +B
IC1502 ON2170 (S-REEL)
IC1501 ON2170 (T-REEL)
MECHANISM CONNECTION C.B.A. (VXA4462)
P6002
P6001
P2001
SERVO 5V
PG/FG
CYL ET
GND (CYL)
MOTOR REG. 12V
P2002 (TO CAPSTAN MOTOR)
REG 12.3V
GND (PG)
FG1
M2
M1
H3−
VH−
H3+
H2−
H1−
H2+
H1+
VH+
M3
(TO SUB MAIN)
DEW (GND)
UNREG 14V
AUDIO SP/LP
FULL ERASE
P.B SIGNAL
P.B LEVEL
AUDIO OUT
SEFETY TAB
REEL +B
AUDIO IN
FF/REW
CAPSTAN FG1
RESET
SOLENOID ON
SENSOR ON
GND (OSC)
SYSTEM CTL 5V
A EE
S.VM
X7
AUDIO MUTE
D.A REC
D.REC
REG 12.3V
D.REC 12V
A HEAD (W)
A HEAD (R)
BIAS GAIN
IC201 NA3814K
OSC
PRESET
INTERFACE
CHARGE DISCHARGE CIRCUIT
START MISS DET
BEMF DET
1/16
MODE SELECT
PG/FG DISP
STOP DET
EXTERNAL SYNC
MULTIPLICATION
POWER (NPN X3)
RATURATION DET
WAVE SHAPER
STOP
TORQUE CTL
THERMAL SHORT DOWN
P202 (TO CYLINDER MOTOR)
P201
L201 100µ
L202 VLP0125
R201 1200
C201 16V10
CYLINDER DRIVE C.B.A. (VEP02375B)
IC2201 XRA6435S
SATURATION DETECTOR
3 DIFFERENTIAL
RATIO COMPOSITE
TORQUE DIRECTION CHANGE OVER
P SIGNAL TORQUE COMPOSITE
3 PHASE GENERATOR
D2099 MA723
TP4001
L2004 VLP0125
D6005
L2001 1m
R4104 8200
R4103 6200
R4102 3300
(1.5dB DOWN)
(3dB UP)
IC6002 µPC358G2

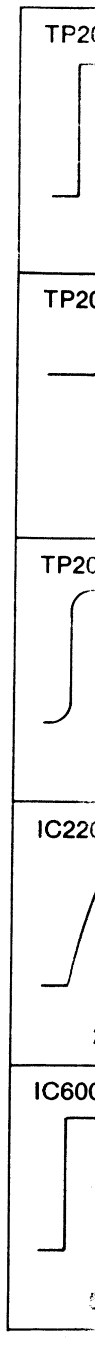
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

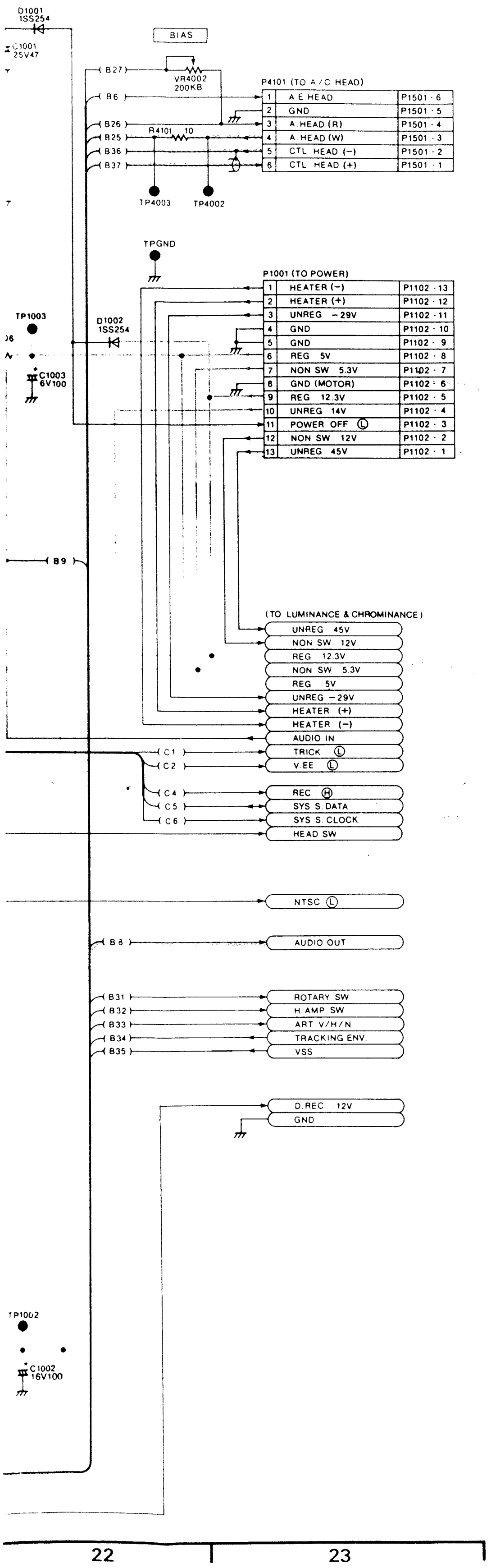
LINDER SERVO PHASE LOOP
LINDER SERVO SPEED LOOP



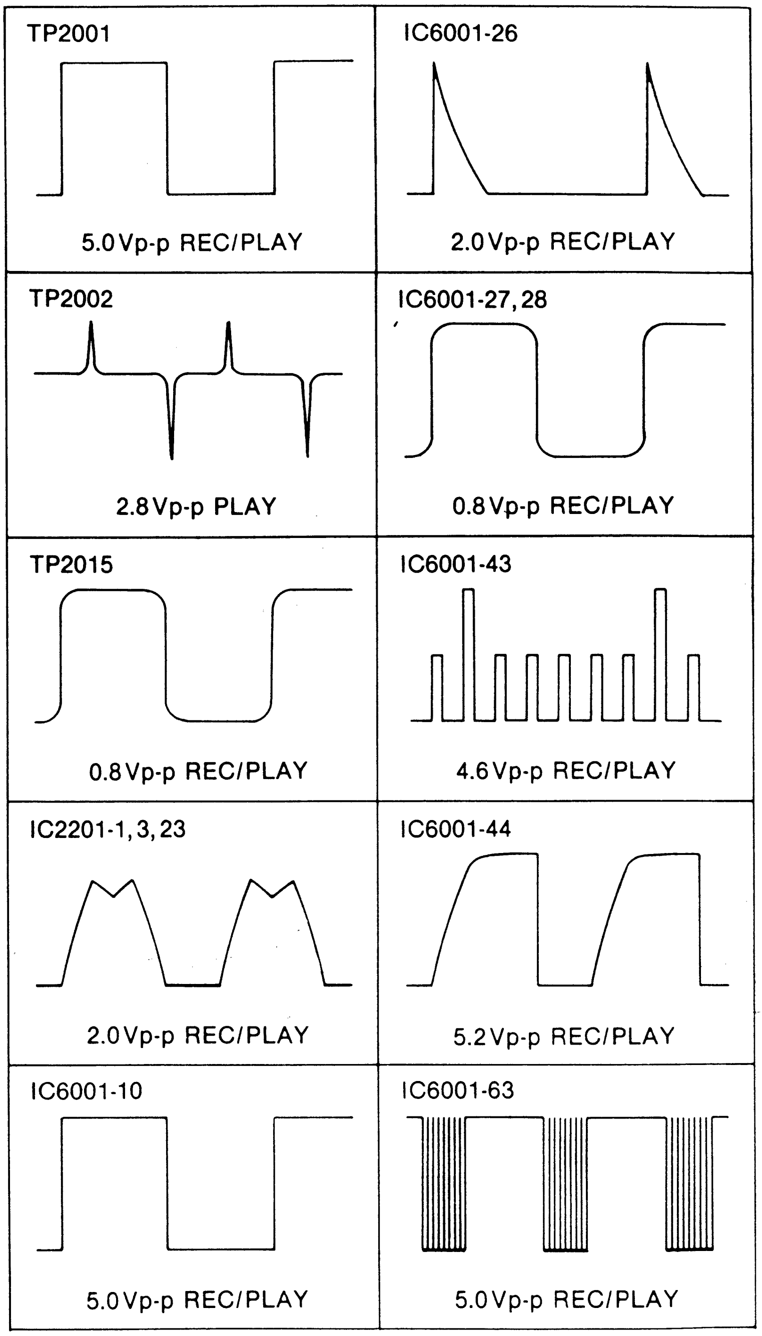
IC6001
MN6743VRDD
IC6002
μPC358G2
HALL POWER
TORQUE DIRECTION DETECTOR
X6501 VSX0479
CAMPS
DEW
S-TAB
TDD/LDD
S-REEL
NOR/SER/TEST
CAS SW
TEST
ENV SELECT
ROTARY SW
VDD
H.AMP SW
ART.V.MM
ART.V/H.N
SLW TR.MM
SLW TR.REF
T-PHOTO
S-PHOTO
T-REEL
SP/LP
AUDIO MODE SEL
+5V (DAC)
CAP ET
CYL ET
TRACK ENV
VSS
CAP FG 1
CAP FG 2
GND (A)
IRFE
PB CTL IN (−)
PB CTL IN (+)
TPZ
CTL (−)
CTL (+)
OCH
PB CTL
CLP
GND
AGC
PB CTL OUT
+5 (A)
CYL PFG
CYL PG MM
AUDIO H.SW
NTSC Ⓛ
AT LED Ⓗ
EDIT TRIG Ⓛ
PREROLL Ⓗ
NTSC REC Ⓛ
FF/REW Ⓛ
SOLENOID ON Ⓛ
INSERT Ⓗ
A.DUB Ⓗ
SENSOR LED ON Ⓛ
PLAY
STOP 2
STOP 1
EJECT
HAED SW
CURRENT LIMIT
CAP R/S/F
S.CLOCK
S.DATA
D.FM REC Ⓗ
D.REC Ⓗ
D.A.REC Ⓗ
FULL E Ⓗ
REC Ⓗ
C.EMPHA Ⓗ
A.MUTE Ⓗ
V.EE Ⓛ
X7 Ⓗ
S.VM
FM A.MUTE Ⓗ
A.EE Ⓗ
LINE INPUT Ⓗ
VTR Ⓗ
TRICK Ⓛ
P.OFF Ⓗ
GND (D)
OSC 1
OSC 2
RST
QR1001 MRN1402 (POWER OFF Ⓗ ON)
QR4102 MRN1404 (A.EE Ⓗ ON)
QR4103 MRN1402 (EX.A.EE Ⓗ ON)
QR2001 MRN1404 (FF/REW Ⓛ OFF)
QR2006 MRN1404 (FF/REW Ⓛ OFF)
PG SHIFTER
BIAS
P4101 (TO A/C HEAD)
1 A.E HEAD P1501-6
2 GND P1501-5
3 A.HEAD (R) P1501-4
4 A.HEAD (W) P1501-3
5 CTL HEAD (−) P1501-2
6 CTL HEAD (+) P1501-1
P1001 (TO POWER)
1 HEATER (−) P1102-13
2 HEATER (+) P1102-12
3 UNREG −29V P1102-11
4 GND P1102-10
5 GND P1102-9
6 REG 5V P1102-8
7 NON SW 5.3V P1102-7
8 GND (MOTOR) P1102-6
9 REG 12.3V P1102-5
10 UNREG 14V P1102-4
11 POWER OFF Ⓛ P1102-3
12 NON SW 12V P1102-2
13 UNREG 45V P1102-1
(TO LUMINANCE & CHROMINANCE)
UNREG 45V
NON SW 12V
REG 12.3V
NON SW 5.3V
REG 5V
UNREG −29V
HEATER (+)
HEATER (−)
AUDIO IN
TRICK Ⓛ
V.EE Ⓛ
REC Ⓗ
SYS S.DATA
SYS S.CLOCK
HEAD SW
NTSC Ⓛ
AUDIO OUT
ROTARY SW
H.AMP SW
ART V/H/N
TRACKING ENV.
VSS
D.REC 12V
GND
TP2001
TP2002
TP2009
TP2015
TP2026
TP1002
TP1003
TP4002
TP4003
TPGND
TPGND2
TPSERV
D2001 1SS254
D1001 1SS254
D1002 1SS254
D6005 1SS254
D6007 1SS254
L6001 VLP0074
L2002 100μ
L2005 100μ
VR2001 50KB
VR4002 200KB
12
13
14
15
16
17
18
19
20
21
22
23

WAV




D1001
1SS254
C1001
25V47
BIAS
B27
VR4002
200KB
B6
P4101 (TO A/C HEAD)
1 A.E HEAD P1501 - 6
2 GND P1501 - 5
3 A.HEAD (R) P1501 - 4
4 A.HEAD (W) P1501 - 3
5 CTL HEAD (−) P1501 - 2
6 CTL HEAD (+) P1501 - 1
B26
B25
B36
B37
R4101 10
TP4003
TP4002
TPGND
P1001 (TO POWER)
1 HEATER (−) P1102 - 13
2 HEATER (+) P1102 - 12
3 UNREG −29V P1102 - 11
4 GND P1102 - 10
5 GND P1102 - 9
6 REG 5V P1102 - 8
7 NON SW 5.3V P1102 - 7
8 GND (MOTOR) P1102 - 6
9 REG 12.3V P1102 - 5
10 UNREG 14V P1102 - 4
11 POWER OFF Ⓛ P1102 - 3
12 NON SW 12V P1102 - 2
13 UNREG 45V P1102 - 1
TP1003
D1002
1SS254
C1003
6V100
B9
(TO LUMINANCE & CHROMINANCE)
UNREG 45V
NON SW 12V
REG 12.3V
NON SW 5.3V
REG 5V
UNREG −29V
HEATER (+)
HEATER (−)
AUDIO IN
C1
TRICK Ⓛ
C2
V.EE Ⓛ
C4
REC Ⓗ
C5
SYS S.DATA
C6
SYS S.CLOCK
HEAD SW
NTSC Ⓛ
B8
AUDIO OUT
B31
ROTARY SW
B32
H.AMP SW
B33
ART V/H/N
B34
TRACKING ENV.
B35
VSS
D.REC 12V
GND
TP1002
C1002
16V100
22
23

WAVEFORM OF SYSTEM CONTROL & SERVO



SYSTEM CONTROL & SERVO ICs DC VOLTAGE CHART

REF. NO.	IC201																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
STOP	13.9	13.9	0.1	0	0	2.6	4.4	0.7	0.5	1.1	5.1	4.3	4.3	3.9	4.9	13.9	13.9	0.1		
PLAY	10.3	10.3	0.1	0.6	0	2.6	2.5	0.6	0.5	2.7	5.1	3.7	3.7	3.7	1.2	10.5	10.3	0.1		
F.F.	13.9	13.9	0.1	0	0	2.6	4.4	0.7	0.5	1.1	5.1	4.3	4.3	3.9	4.9	13.9	13.9	0.1		

REF. NO.	IC2201																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	7.5	0	7.5	1.4	2.1	2.1	2.1	2.1	2.1	2.1	2.1	0	5.1	3.7	2.8	2.3	5.1	0	0.4	0
PLAY	3.0	0.1	2.6	1.3	2.2	2.2	2.2	2.2	2.2	2.2	0	0	5.1	3.8	2.8	2.5	5.1	0.6	0.4	0.1
F.F.	3.5	0.1	6.8	1.4	2.1	2.1	2.1	2.1	2.1	2.1	0	0	5.1	3.7	2.8	2.5	5.1	0.7	0.4	0.1

REF. NO.	IC2201																			
MODE	21	22	23	24																
STOP	0	0.6	7.5	13.9																
PLAY	0	0.6	3.0	10.5																
F.F.	0	0.6	6.5	13.9																

REF. NO.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	5.0	0.6	0.5	5.0	0.6	5.0	2.0	0	0	5.0	5.0	0	0	0	0	2.5	3.2	0	4.2	0
PLAY	5.0	0.6	0.5	5.0	3.9	5.0	2.0	0	0	4.6	5.0	0	0	0	0	2.5	3.2	3.2	4.2	0
F.F.	0	0.6	0.5	5.0	2.5	5.0	2.0	0	0	5.0	5.0	0	0	0	0	2.5	3.2	3.2	2.7	0

REF. NO.	IC6001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	5.0	5.0	2.3	4.2	1.6	2.5	2.5	2.5	0	0	2.4	2.6	5.0	0	0	0	2.5	2.5	0	2.5
PLAY	5.0*	5.0	2.6	2.5	0	2.5	2.5	2.5	0	0	0	0	5.0	0	0	0	2.5	2.5	0	2.9
F.F.	5.0	5.0	2.5	4.2	1.6	2.5	2.5	2.5	0	2.5	0	2.6	5.0	0	0	0	2.5	2.5	0	2.9

REF. NO.	IC6001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	2.5	5.0	5.1	0.1	0	0.1	0	5.0	0	4.8	5.0	5.0	0	0	4.8	5.0	5.0	0	4.8	0
PLAY	0	5.0	1.0	3.0	0.6	0.1	4.9	5.0	0	4.8	5.0	5.0	0	0	5.0	0	5.0	5.0	4.8	5.0
F.F.	2.4	5.0	5.1	0.1	0	0.1	0	5.0	0	4.9	0	5.0	0	0	4.8	5.0	5.0	0	4.8	0

REF. NO.	IC6001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	5.0	2.1	4.5	4.8	0	0	0	0	0.2	0	0	0	5.0	5.0	0	5.0	5.0	0	0	0
PLAY	5.0	0	4.7	4.8	0	0	0	0	0.2	0	0	5.0	0	0	0	0	5.0	5.0	5.0	0
F.F.	5.0	0	4.7	4.8	0	0	0	0	0	0	0	0	5.0	5.0	0	5.0	5.0	0	0	0

REF. NO.	IC6001																			
MODE	81	82	83	84																
STOP	0	2.4	2.4	4.8																
PLAY	0	2.4	2.4	4.8																
F.F.	0	2.4	2.4	0																

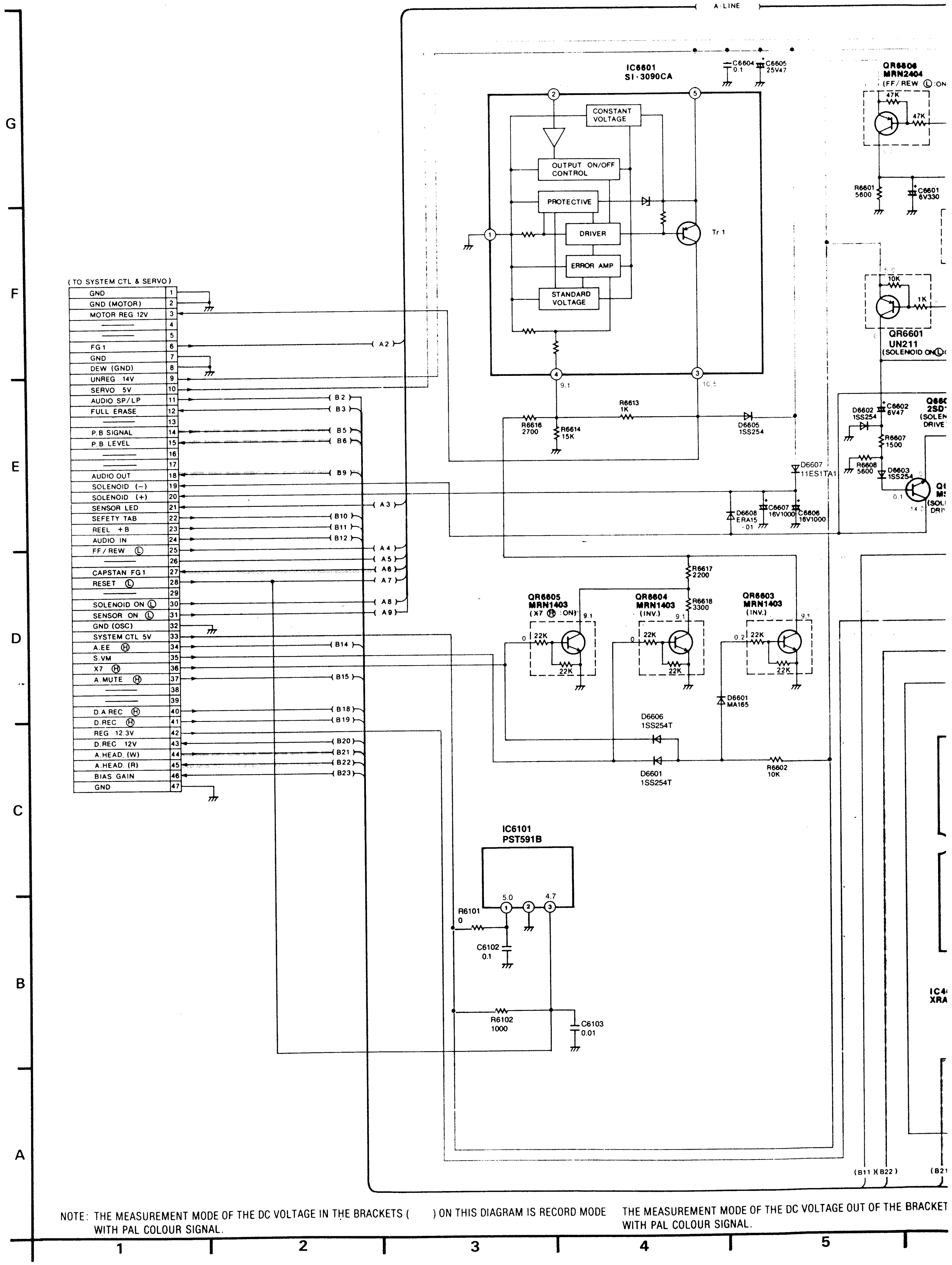
REF. NO.	IC6002																			
MODE	1	2	3	4	5	6	7	8												
STOP	2.5	2.5	2.5	0	2.5	4.6	0.6	5.0												
PLAY	2.5	2.5	2.5	0	2.6	4.7	3.8	5.0												
F.F.	2.5	2.5	2.5	0	2.5	2.4	2.5	5.0												

SYSTEM CONTROL & SERVO TRANSISTORs DC VOLTAGE CHART

REF. NO.	QR1001			QR2001			QR2006			QR4102			QR4103					
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B			
STOP	0	13.1	0	0	0	5.0	0	0	5.0	0	0	5.0	0	0	0			
PLAY	0	13.1	0	0	0	5.0	0	0	5.0	0	2.2	0	0	0	2.2			
F.F.	0	13.1	0	0	0	0	0	0.8	0	0	0	5.0	0	0	0			

3-6. SUB MAIN SCHEMATIC DIAGRAM

CAPSTAN SERVO SPEED LOOP

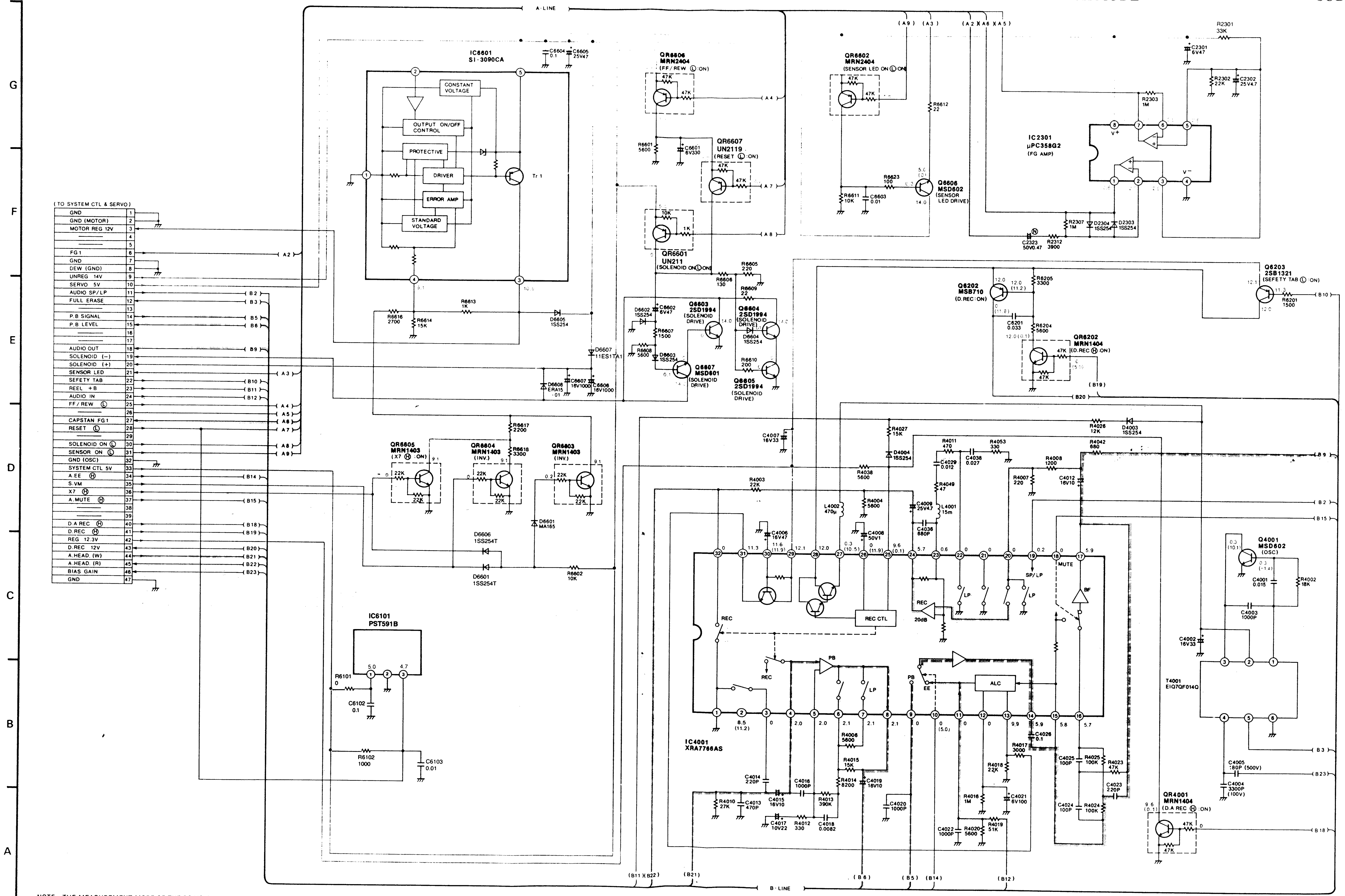

A·LINE
G
F
E
D
C
B
A
1
2
3
4
5
(TO SYSTEM CTL & SERVO)
GND 1
GND (MOTOR) 2
MOTOR REG 12V 3
4
5
FG1 6
GND 7
DEW (GND) 8
UNREG 14V 9
SERVO 5V 10
AUDIO SP/LP 11
FULL ERASE 12
13
P.B SIGNAL 14
P.B LEVEL 15
16
17
AUDIO OUT 18
SOLENOID (−) 19
SOLENOID (+) 20
SENSOR LED 21
SEFETY TAB 22
REEL +B 23
AUDIO IN 24
FF/REW Ⓛ 25
26
CAPSTAN FG1 27
RESET Ⓛ 28
29
SOLENOID ON Ⓛ 30
SENSOR ON Ⓛ 31
GND (OSC) 32
SYSTEM CTL 5V 33
A.EE Ⓗ 34
S.VM 35
X7 Ⓗ 36
A.MUTE Ⓗ 37
38
39
D.A REC Ⓗ 40
D.REC Ⓗ 41
REG 12.3V 42
D.REC 12V 43
A.HEAD. (W) 44
A.HEAD. (R) 45
BIAS GAIN 46
GND 47
A2
A3
A4
A5
A6
A7
A8
A9
B2
B3
B5
B6
B9
B10
B11
B12
B14
B15
B18
B19
B20
B21
B22
B23
IC6601
SI-3090CA
CONSTANT VOLTAGE
OUTPUT ON/OFF CONTROL
PROTECTIVE
DRIVER
ERROR AMP
STANDARD VOLTAGE
Tr 1
C6604 0.1
C6605 25V47
9.1
10.5
R6613 1K
R6616 2700
R6614 15K
D6605 1SS254
D6607 11ES1TA1
D6608 ERA15-01
C6607 16V1000
C6606 16V1000
QR6606 MRN2404 (FF/REW Ⓛ:ON
47K
47K
R6601 5600
C6601 6V330
5.0
10K
1K
QR6601 UN211 (SOLENOID ON Ⓛ
D6602 1SS254
C6602 6V47
R6607 1500
R6608 5600
D6603 1SS254
2SD
(SOLEN DRIVE
0.1
14.0
R6617 2200
R6618 3300
QR6605 MRN1403 (X7 Ⓡ :ON)
QR6604 MRN1403 (INV.)
QR6603 MRN1403 (INV.)
9.1
0
0.2
22K
22K
D6601 MA165
D6606 1SS254T
D6601 1SS254T
R6602 10K
IC6101 PST591B
5.0
4.7
R6101 0
C6102 0.1
R6102 1000
C6103 0.01
(B11)(B22)
(B21

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKET WITH PAL COLOUR SIGNAL.

3-6. SUB MAIN SCHEMATIC DIAGRAM

CAPSTAN SERVO SPEED LOOP

AUDIO MAIN SIGNAL PATH IN REC MODE
AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE


A-LINE
B-LINE
(TO SYSTEM CTL & SERVO)
GND 1
GND (MOTOR) 2
MOTOR REG 12V 3
4
5
FG1 6
GND 7
DEW (GND) 8
UNREG 14V 9
SERVO 5V 10
AUDIO SP/LP 11
FULL ERASE 12
13
P.B SIGNAL 14
P.B LEVEL 15
16
17
AUDIO OUT 18
SOLENOID (−) 19
SOLENOID (+) 20
SENSOR LED 21
SEFETY TAB 22
REEL +B 23
AUDIO IN 24
FF/REW Ⓛ 25
26
CAPSTAN FG1 27
RESET Ⓛ 28
29
SOLENOID ON Ⓛ 30
SENSOR ON Ⓛ 31
GND (OSC) 32
SYSTEM CTL 5V 33
A.EE Ⓗ 34
S.VM 35
X7 Ⓗ 36
A.MUTE Ⓗ 37
38
39
D.A REC Ⓗ 40
D.REC Ⓗ 41
REG 12.3V 42
D.REC 12V 43
A.HEAD. (W) 44
A.HEAD. (R) 45
BIAS GAIN 46
GND 47
IC6601 SI-3090CA
CONSTANT VOLTAGE
OUTPUT ON/OFF CONTROL
PROTECTIVE
DRIVER
ERROR AMP
STANDARD VOLTAGE
Tr 1
C6604 0.1
C6605 25V47
R6616 2700
R6614 15K
R6613 1K
D6605 1SS254
D6607 11ES1TA1
D6608 ERA15-01
C6607 16V1000
C6606 16V1000
QR6606 MRN2404 (FF/REW Ⓛ:ON)
47K
R6601 5600
C6601 6V330
QR6607 UN2119 (RESET Ⓛ:ON)
QR6601 UN211 (SOLENOID ON Ⓛ:ON)
10K
1K
R6606 130
R6605 220
R6609 22
D6602 1SS254
C6602 6V47
R6607 1500
R6608 5600
D6603 1SS254
Q6603 2SD1994 (SOLENOID DRIVE)
Q6604 2SD1994 (SENSOR DRIVE)
D6604 1SS254
R6610 200
Q6607 MSD601 (SOLENOID DRIVE)
Q6605 2SD1994 (SOLENOID DRIVE)
QR6602 MRN2404 (SENSOR LED ON Ⓛ:ON)
R6612 22
R6623 100
R6611 10K
C6603 0.01
Q6606 MSD602 (SENSOR LED DRIVE)
IC2301 μPC358G2 (FG AMP)
V+
V−
R2301 33K
C2301 6V47
R2302 22K
C2302 25V4.7
R2303 1M
C2323 50V0.47
R2307 1M
R2312 3900
D2304 1SS254
D2303 1SS254
Q6202 MSB710 (D.REC:ON)
R6205 3300
C6201 0.033
R6204 5600
QR6202 MRN1404 (D.REC Ⓗ:ON)
Q6203 2SB1321 (SEFETY TAB Ⓛ:ON)
R6201 1500
R6617 2200
R6618 3300
QR6605 MRN1403 (X7 Ⓗ:ON)
QR6604 MRN1403 (INV.)
QR6603 MRN1403 (INV.)
22K
D6606 1SS254T
D6601 1SS254T
D6601 MA165
R6602 10K
IC6101 PST591B
R6101 0
C6102 0.1
R6102 1000
C6103 0.01
C4007 16V33
R4027 15K
D4004 1SS254
R4003 22K
R4038 5600
R4011 470
R4053 330
C4038 0.027
C4029 0.012
R4049 47
L4002 470μ
R4004 5600
C4009 25V4.7
L4001 15m
C4036 680P
C4006 16V47
C4008 50V1
R4026 12K
D4003 1SS254
R4042 680
R4008 1200
R4007 220
C4012 16V10
REC CTL
REC
20dB
MUTE
SP/LP
LP
BF
PB
EE
ALC
IC4001 XRA7766AS
R4006 5600
R4015 15K
R4014 8200
C4019 16V10
C4014 220P
C4016 1000P
R4013 390K
C4015 16V10
R4010 27K
C4013 470P
C4017 10V22
R4012 330
C4018 0.0082
C4020 1000P
R4016 1M
C4021 6V100
R4018 22K
R4017 3000
C4026 0.1
C4022 1000P
R4020 5600
R4019 51K
C4025 100P
R4025 100K
R4023 47K
C4023 220P
C4024 100P
R4024 100K
Q4001 MSD602 (OSC)
C4001 0.015
R4002 18K
C4003 1000P
C4002 16V33
T4001 EIQ7QF014Q
C4005 180P (500V)
C4004 3300P (100V)
QR4001 MRN1404 (D.A REC Ⓗ:ON)
47K
A2 A3 A4 A5 A6 A7 A8 A9
B2 B3 B5 B6 B9 B10 B11 B12 B14 B15 B18 B19 B20 B21 B22 B23
G F E D C B A
1 2 3 4 5 6 7 8 9 10

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.

• LINE IN SIGNAL LEVEL… −10dB 1kHz

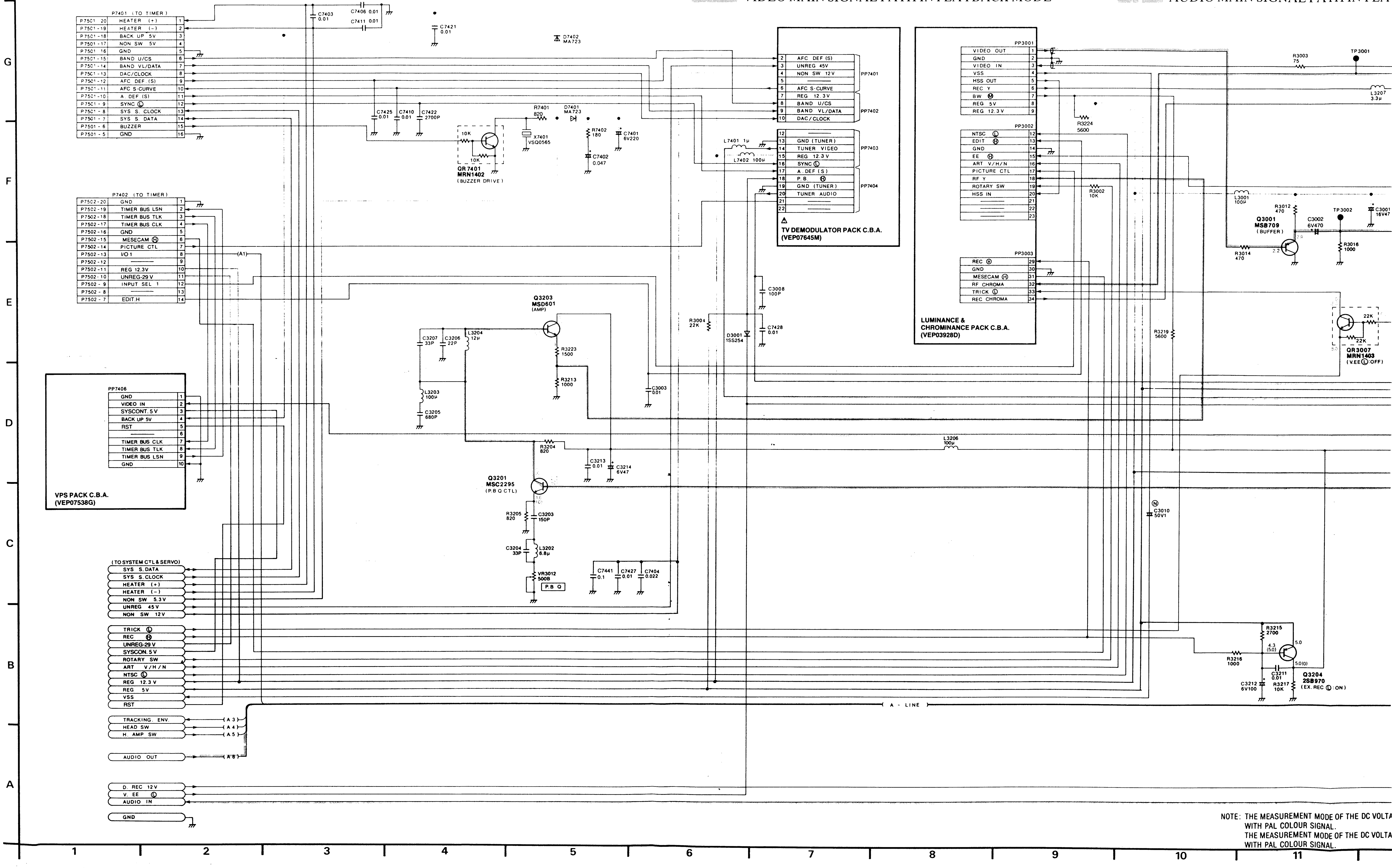
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

Next Page:
LUMINANCE & CHROMINANCE Section

3-7. LUMINANCE & CHROMINANCE SCHEMATIC DIAGRAM

VIDEO MAIN SIGNAL PATH IN REC MODE
▨ VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE

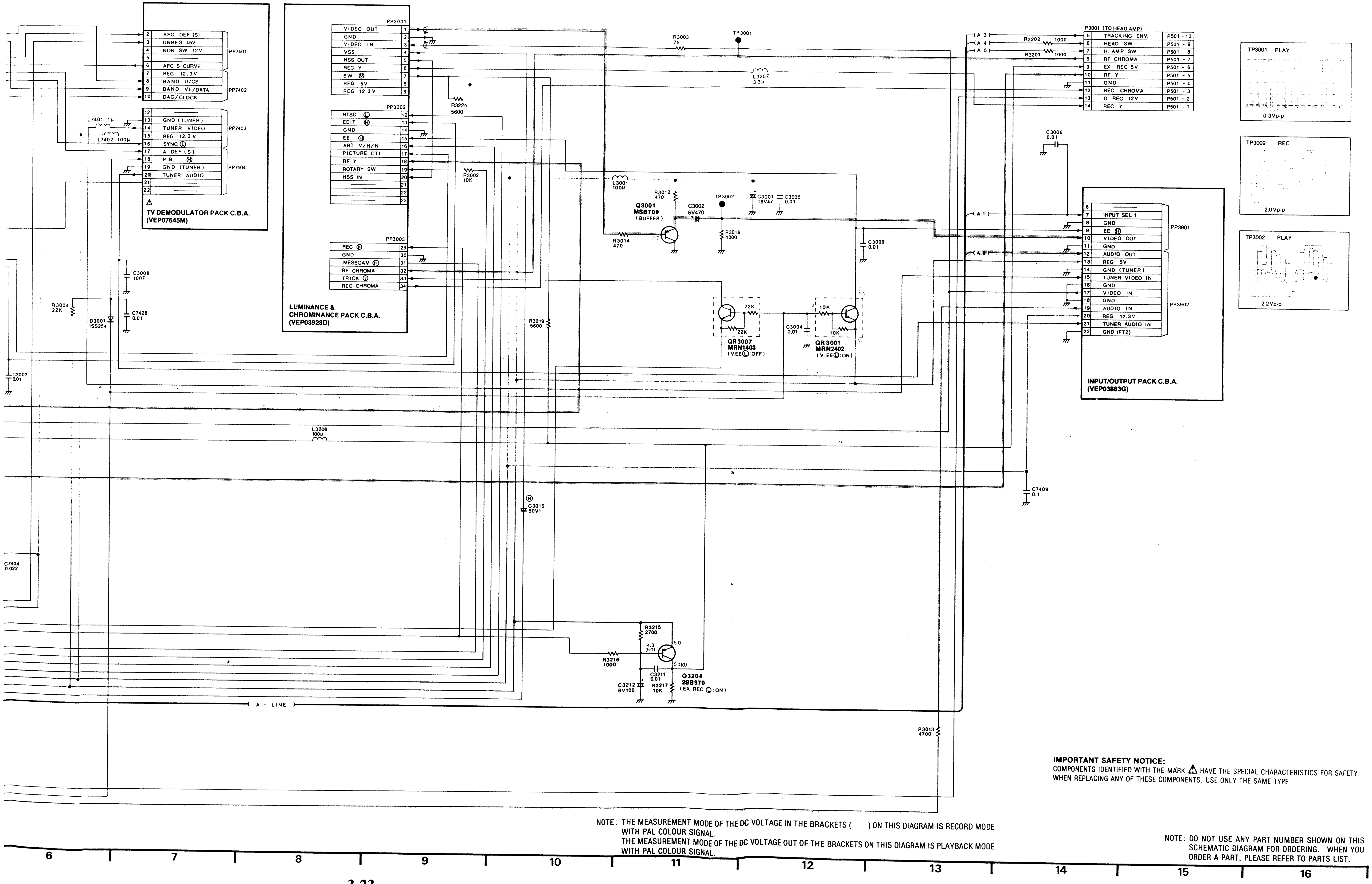
AUDIO MAIN SIGNAL PATH IN REC
▨ AUDIO MAIN SIGNAL PATH IN PLA


P7401 (TO TIMER)
P7501-20 HEATER (+) 1
P7501-19 HEATER (−) 2
P7501-18 BACK UP 5V 3
P7501-17 NON SW 5V 4
P7501-16 GND 5
P7501-15 BAND U/CS 6
P7501-14 BAND VL/DATA 7
P7501-13 DAC/CLOCK 8
P7501-12 AFC DEF (S) 9
P7501-11 AFC S-CURVE 10
P7501-10 A DEF (S) 11
P7501-9 SYNC Ⓛ 12
P7501-8 SYS S. CLOCK 13
P7501-7 SYS S. DATA 14
P7501-6 BUZZER 15
P7501-5 GND 16
P7402 (TO TIMER)
P7502-20 GND 1
P7502-19 TIMER BUS LSN 2
P7502-18 TIMER BUS TLK 3
P7502-17 TIMER BUS CLK 4
P7502-16 GND 5
P7502-15 MESECAM Ⓗ 6
P7502-14 PICTURE CTL 7
P7502-13 I/O 1 8
P7502-12 9
P7502-11 REG 12.3V 10
P7502-10 UNREG-29V 11
P7502-9 INPUT SEL 1 12
P7502-8 13
P7502-7 EDIT.H 14
(A1)
PP7406
GND 1
VIDEO IN 2
SYSCONT. 5V 3
BACK UP 5V 4
RST 5
6
TIMER BUS CLK 7
TIMER BUS TLK 8
TIMER BUS LSN 9
GND 10
VPS PACK C.B.A.
(VEP07538G)
(TO SYSTEM CTL & SERVO)
SYS S. DATA
SYS S. CLOCK
HEATER (+)
HEATER (−)
NON SW 5.3V
UNREG 45V
NON SW 12V
TRICK Ⓛ
REC Ⓗ
UNREG-29V
SYSCON. 5V
ROTARY SW
ART V/H/N
NTSC Ⓛ
REG 12.3V
REG 5V
VSS
RST
TRACKING ENV.
HEAD SW
H. AMP SW
(A3)
(A4)
(A5)
AUDIO OUT
(A6)
D. REC 12V
V. EE Ⓛ
AUDIO IN
GND
A - LINE
C7403 0.01
C7406 0.01
C7411 0.01
C7421 0.01
D7402 MA723
C7425 0.01
C7410 0.01
C7422 2700P
R7401 820
D7401 MA723
R7402 180
C7401 6V220
C7402 0.047
X7401 VSQ0565
10K
10K
QR7401
MRN1402
(BUZZER DRIVE)
Q3203
MSD601
(AMP)
C3207 33P
C3206 22P
L3204 12μ
R3223 1500
R3213 1000
L3203 100μ
C3205 680P
C3003 0.01
R3204 820
C3213 0.01
C3214 6V47
Q3201
MSC2295
(P.B Q CTL)
R3205 820
C3203 150P
C3204 33P
L3202 6.8μ
VR3012 500B
P.B Q
C7441 0.1
C7427 0.01
C7404 0.022
L3206 100μ
L7401 1μ
L7402 100μ
C3008 100P
R3004 22K
D3001 1SS254
C7428 0.01
2 AFC DEF (S)
3 UNREG 45V
4 NON SW 12V
5
6 AFC S-CURVE
7 REG 12.3V
8 BAND U/CS
9 BAND VL/DATA
10 DAC/CLOCK
PP7401
PP7402
12
13 GND (TUNER)
14 TUNER VIDEO
15 REG 12.3V
16 SYNC Ⓛ
17 A. DEF (S)
18 P.B Ⓗ
19 GND (TUNER)
20 TUNER AUDIO
21
22
PP7403
PP7404
⚠
TV DEMODULATOR PACK C.B.A.
(VEP07645M)
PP3001
VIDEO OUT 1
GND 2
VIDEO IN 3
VSS 4
HSS OUT 5
REC Y 6
BW Ⓜ 7
REG 5V 8
REG 12.3V 9
PP3002
NTSC Ⓛ 12
EDIT Ⓗ 13
GND 14
EE Ⓗ 15
ART V/H/N 16
PICTURE CTL 17
RF Y 18
ROTARY SW 19
HSS IN 20
21
22
23
PP3003
REC Ⓗ 29
GND 30
MESECAM Ⓗ 31
RF CHROMA 32
TRICK Ⓛ 33
REC CHROMA 34
LUMINANCE &
CHROMINANCE PACK C.B.A.
(VEP03928D)
R3224 5600
R3002 10K
R3219 5600
C3010 50V1
Ⓝ
R3003 75
TP3001
L3207 3.3μ
L3001 100μ
R3012 470
Q3001
MSB709
(BUFFER)
C3002 6V470
TP3002
C3001 16V47
R3014 470
R3016 1000
2.2
22K
22K
QR3007
MRN1403
(V.EE Ⓛ:OFF)
R3215 2700
4.3 (5.0)
5.0
5.0(0)
R3216 1000
C3211 0.01
C3212 6V100
R3217 10K
Q3204
2SB970
(EX. REC Ⓛ:ON)
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11

NOTE: THE MEASUREMENT MODE OF THE DC VOLTA
WITH PAL COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTA
WITH PAL COLOUR SIGNAL.

VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE

AUDIO MAIN SIGNAL PATH IN REC MODE
AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

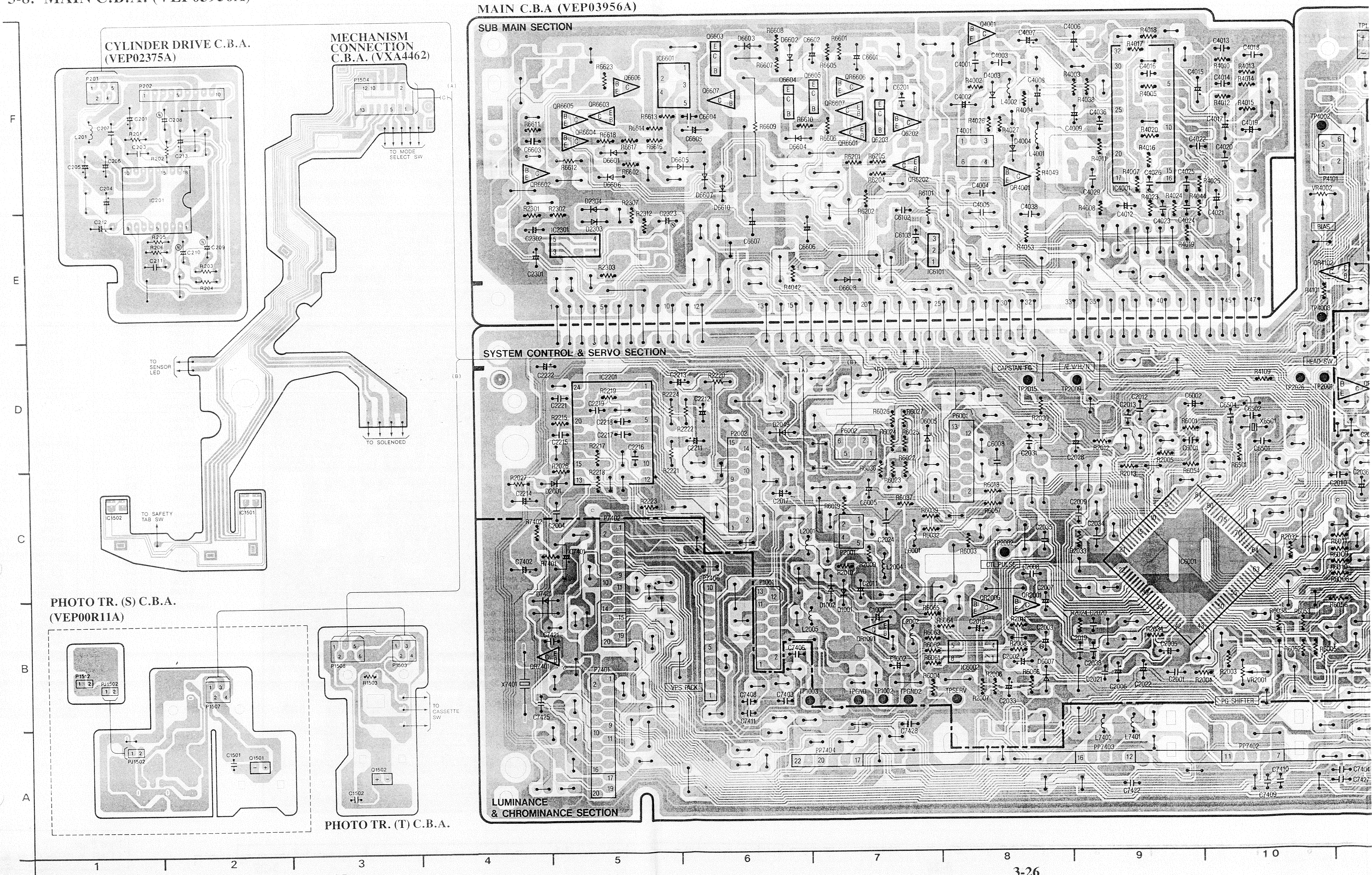

2 AFC DEF (S)
3 UNREG 45V
4 NON SW 12V
5
6 AFC S-CURVE
7 REG 12.3V
8 BAND U/CS
9 BAND VL/DATA
10 DAC/CLOCK
PP7401
PP7402
12
13 GND (TUNER)
14 TUNER VIDEO
15 REG 12.3V
16 SYNC Ⓛ
17 A. DEF (S)
18 P.B Ⓗ
19 GND (TUNER)
20 TUNER AUDIO
21
22
PP7403
PP7404
⚠
TV DEMODULATOR PACK C.B.A.
(VEP07645M)
L7401 1μ
L7402 100μ
C3008 100P
R3004 22K
D3001 1SS254
C7428 0.01
C3003 0.01
C7404 0.022
PP3001
VIDEO OUT 1
GND 2
VIDEO IN 3
VSS 4
HSS OUT 5
REC Y 6
BW Ⓜ 7
REG 5V 8
REG 12.3V 9
PP3002
NTSC Ⓛ 12
EDIT Ⓗ 13
GND 14
EE Ⓗ 15
ART V/H/N 16
PICTURE CTL 17
RF Y 18
ROTARY SW 19
HSS IN 20
21
22
23
PP3003
REC Ⓗ 29
GND 30
MESECAM Ⓗ 31
RF CHROMA 32
TRICK Ⓛ 33
REC CHROMA 34
LUMINANCE &
CHROMINANCE PACK C.B.A.
(VEP03928D)
R3224 5600
R3002 10K
R3219 5600
Ⓝ
C3010 50V1
L3206 100μ
R3003 75
TP3001
L3207 3.3μ
L3001 100μ
R3012 470
Q3001
MSB709
(BUFFER)
R3014 470
2.2
C3002 6V470
TP3002
R3016 1000
C3001 16V47
C3005 0.01
C3009 0.01
22K
22K
QR3007
MRN1403
(V.EEⓁ:OFF)
C3004 0.01
10K
10K
QR3001
MRN2402
(V.EEⓁ:ON)
R3215 2700
4.3
(5.0)
5.0
5.0(0)
R3216 1000
C3211 0.01
C3212 6V100
R3217 10K
Q3204
2SB970
(EX. REC Ⓛ:ON)
A - LINE
R3013 4700
(A 3)
(A 4)
(A 5)
(A 1)
(A 6)
R3202 1000
R3201 1000
P3001 (TO HEAD AMP)
5 TRACKING ENV. P501 - 10
6 HEAD SW P501 - 9
7 H. AMP SW P501 - 8
8 RF CHROMA P501 - 7
9 EX. REC 5V P501 - 6
10 RF Y P501 - 5
11 GND P501 - 4
12 REC CHROMA P501 - 3
13 D. REC 12V P501 - 2
14 REC Y P501 - 1
C3006 0.01
6
7 INPUT SEL 1
8 GND
9 EE Ⓗ
10 VIDEO OUT
11 GND
12 AUDIO OUT
13 REG 5V
14 GND (TUNER)
15 TUNER VIDEO IN
16 GND
17 VIDEO IN
18 GND
19 AUDIO IN
20 REG 12.3V
21 TUNER AUDIO IN
22 GND (FTZ)
PP3901
PP3902
INPUT/OUTPUT PACK C.B.A.
(VEP03883G)
C7409 0.1
TP3001 PLAY
0.3Vp-p
TP3002 REC
2.0Vp-p
TP3002 PLAY
2.2Vp-p
6
7
8
9
10
11
12
13
14
15
16

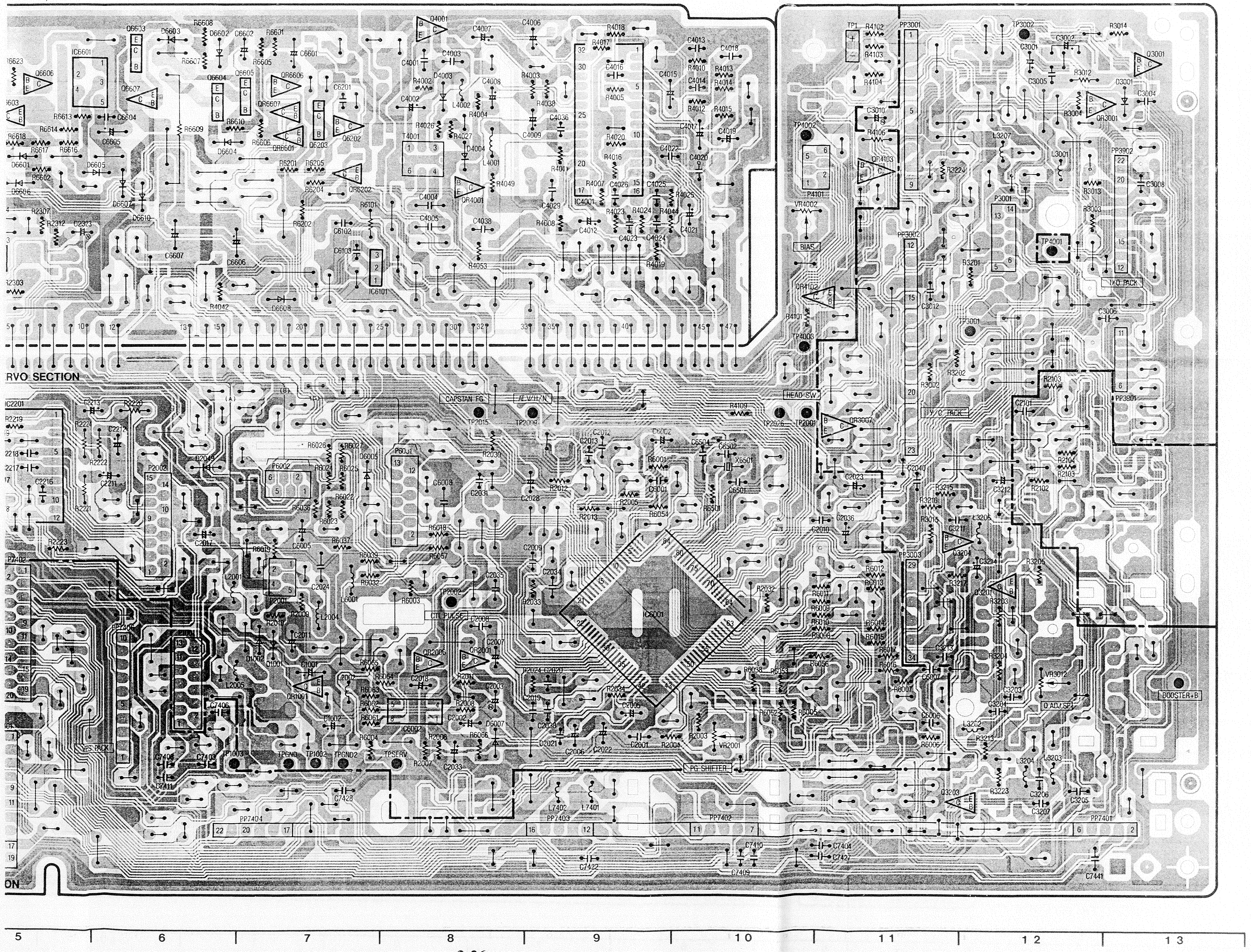
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-8. MAIN C.B.A. (VEP03956A)


MAIN C.B.A (VEP03956A)
SUB MAIN SECTION
SYSTEM CONTROL & SERVO SECTION
LUMINANCE & CHROMINANCE SECTION
CYLINDER DRIVE C.B.A. (VEP02375A)
MECHANISM CONNECTION C.B.A. (VXA4462)
PHOTO TR. (S) C.B.A. (VEP00R11A)
PHOTO TR. (T) C.B.A.
TO MODE SELECT SW
TO SENSOR LED
TO SOLENOED
TO SAFETY TAB SW
TO CASSETTE SW
IC201
IC2201
IC6001
IC6101
IC6601
IC4001
IC2301
IC6002
IC1501
IC1502
P1504
P1508
P1503
P1507
P1512
PJ1502
P2002
P1001
P2001
P6001
P6002
P7401
P7402
P4101
CAPSTAN FG
CTL PULSE
HEAD SW
BIAS
VPS PACK
PG SHIFTER
TP2015
TP2009
TP2026
TP2001
TP2002
TP1003
TPGND
TP1002
TPGND2
TPSERV
TP4002
TP4003
VR4002
VR2001
X7401
X6501
A
B
C
D
E
F
1
2
3
4
5
6
7
8
9
10


RVO SECTION
CAPSTAN FG
AL V/H/N
HEAD SW
Y/C PACK
I/O PACK
BIAS
CTL PULSE
PG SHIFTER
YES PACK
Q ADJ SP
BOOSTER+B
IC6001
IC6002
IC6101
IC6601
IC4001
IC2201
T4001
P4101
P3001
P6001
P6002
P2002
PP3001
PP3002
PP3003
PP3901
PP3902
PP7401
PP7402
PP7403
PP7404
TP1
TP2015
TP2009
TP2026
TP2001
TP2002
TP3001
TP3002
TP4001
TP4002
TP4003
TP1002
TP1003
TPGND
TPGND2
TPSERV
VR2001
VR3012
VR4002
5
6
7
8
9
10
11
12
13

MAIN C.B.A.
ADDRESS INFORMATION

SYSTEM CONTROL & SERVO Section	
Transistor	
Q1501	A-2
Q1502	A-3
Transistor & Resistor	
QR1001	B-7
QR2001	B-8
QR2006	B-8
QR4102	E-10
QR4103	F-11
Integrated Circuit	
IC201	F-2
IC1501	C-2
IC1502	C-1
IC2201	D-5
IC6001	C-9
IC6002	B-8
Test Point	
TP1002	B-7
TP1003	B-6
TP2001	D-10
TP2002	C-8
TP2009	D-9
TP2015	D-8
TP2026	D-10
TP4001	E-12
TP4002	F-10
TP4003	E-10
TPGND	B-7
TPGND2	B-7
TPSERV	B-8
Adjustment	
VR2001	B-10
VR4002	E-10
Connector	
P201	F-1
P202	F-1
P1001	B-6
P1503	B-3
P1504	F-3
P1507	B-2
P1508	B-3
P1512	B-1
P2001	C-7
P2002	D-6
P4101	F-11
P6001	D-8
P6002	D-7
PJ1502	A-1
PJ1502	B-1

ADDRESS INFORMATION

LUMINANCE & CHROMINANCE Section	
Transistor	
Q3001	F-13
Q3201	C-12
Q3203	A-11
Q3204	C-11
Transistor & Resistor	
QR3001	F-12
QR3007	D-11
QR7401	B-4
Test Point	
TP3001	E-12
TP3002	F-12
Adjustment	
VR3012	B-12
Connector	
P3001	F-12
P7401	B-5
P7402	C-5
PP3001	F-11
PP3002	E-11
PP3003	C-11
PP3901	D-13
PP3902	F-13
PP7401	A-12
PP7402	A-10
PP7403	A-9
PP7404	A-7
PP7406	C-6

ADDRESS INFORMATION

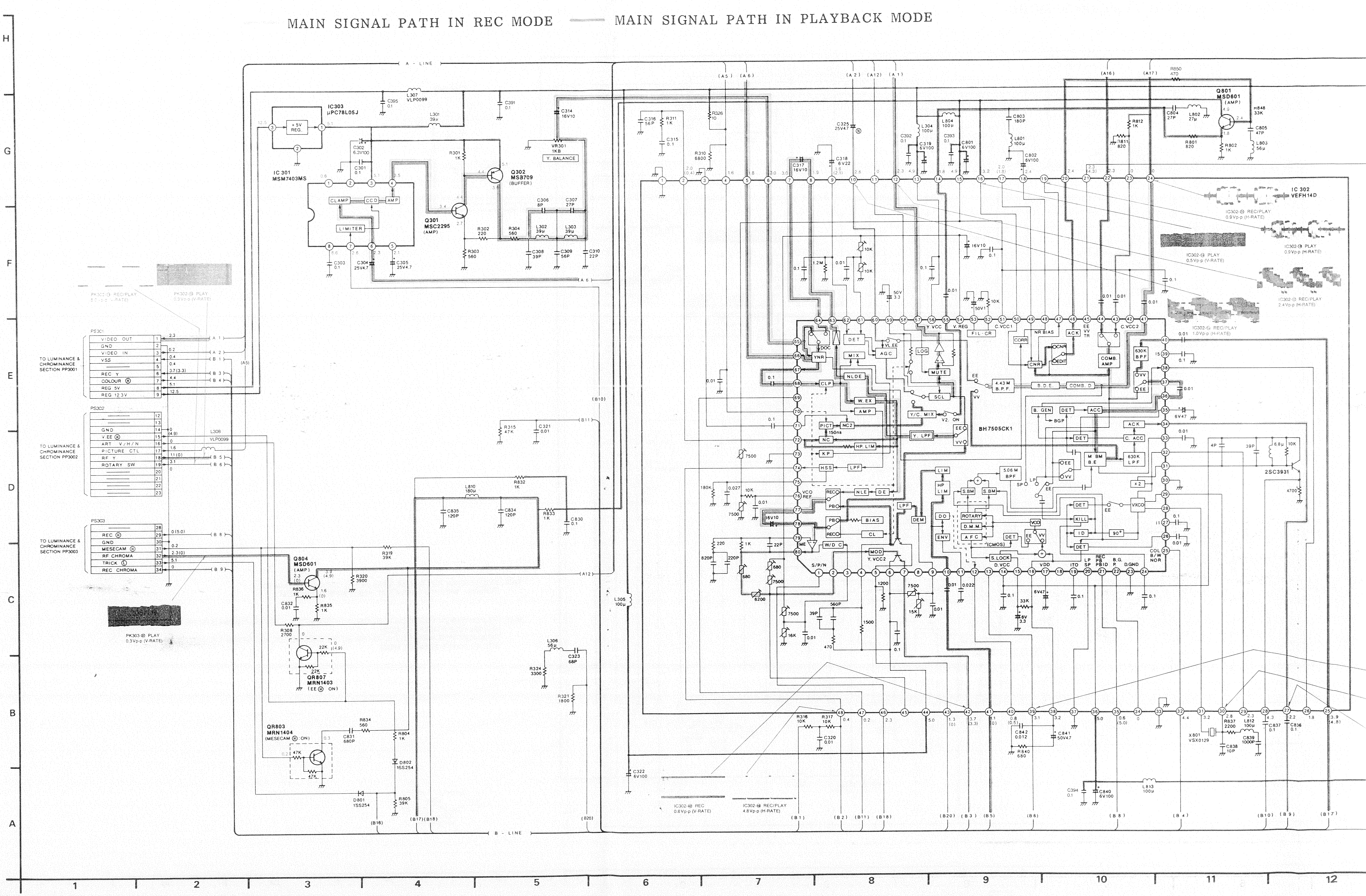
SUB MAIN Section	
Transistor	
Q4001	F-8
Q6202	F-7
Q6203	F-7
Q6603	F-6
Q6604	F-6
Q6605	F-7
Q6606	F-5
Q6607	F-6
Transistor & Resistor	
QR4001	F-8
QR6202	F-7
QR6601	F-7
QR6602	F-4
QR6603	F-5
QR6604	F-5
QR6605	F-5
QR6606	F-7
QR6607	F-7
Integrated Circuit	
IC2301	E-5
IC4001	F-9
IC6101	E-7
IC6601	F-6

ADDRESS INFORMATION

Next Page:
LUMI. & CHRO. PACK Section

3-9. LUMINANCE & CHROMINANCE PACK SCHEMATIC DIAGRAM

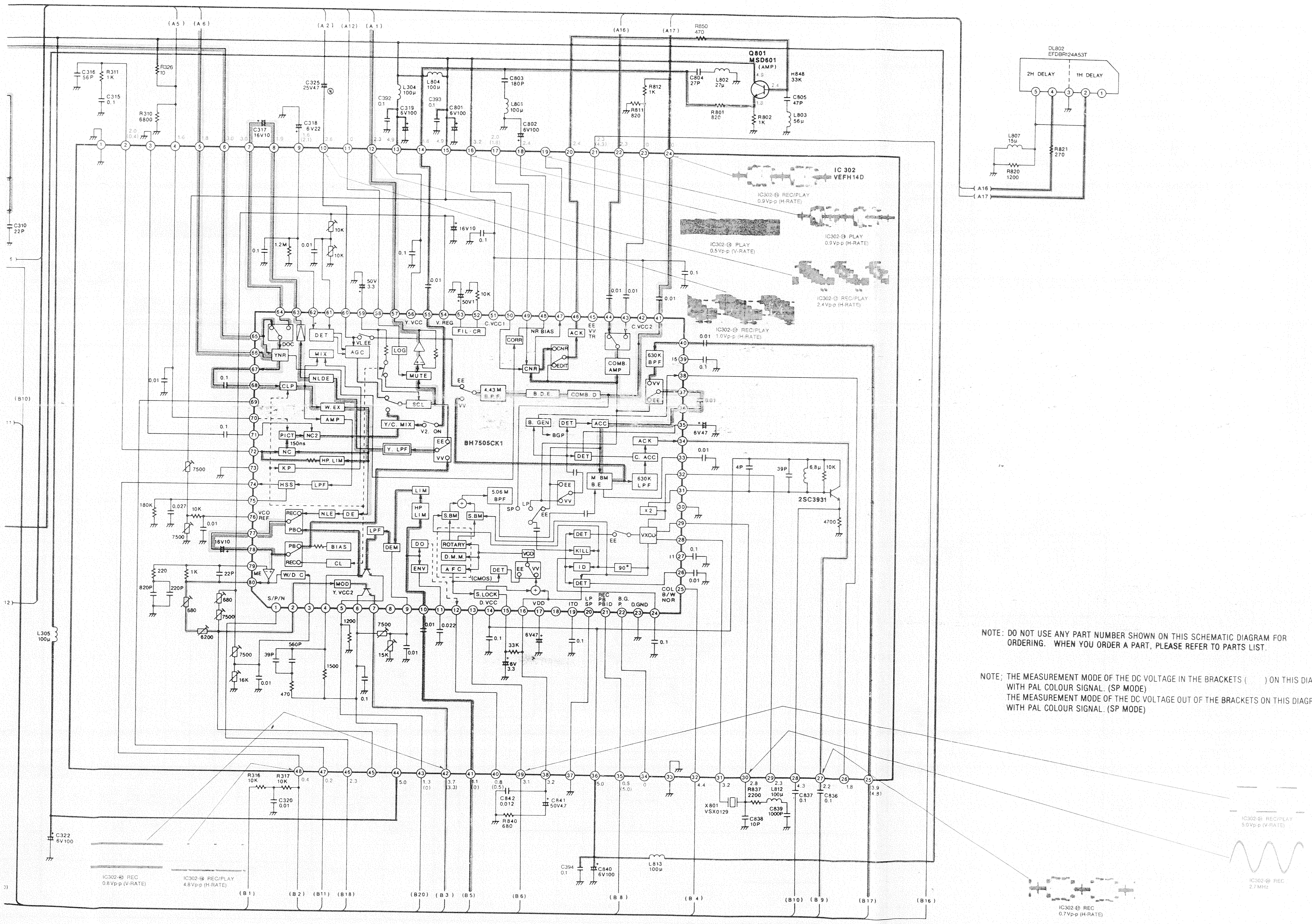
MAIN SIGNAL PATH IN REC MODE —— MAIN SIGNAL PATH IN PLAYBACK MODE



A - LINE
B - LINE
IC303 μPC78L05J
IC301 MSM7403MS
CLAMP
CCD
AMP
LIMITER
+5V REG.
Q301 MSC2295 (AMP)
Q302 MSB709 (BUFFER)
VR301 1KB
Y. BALANCE
PS301
VIDEO OUT
GND
VIDEO IN
VSS
REC Y
COLOUR
REG 5V
REG 12.3V
TO LUMINANCE & CHROMINANCE SECTION PP3001
PS302
GND
V.EE
ART V/H/N
PICTURE CTL
RF Y
ROTARY SW
TO LUMINANCE & CHROMINANCE SECTION PP3002
PS303
REC
GND
MESECAM
RF CHROMA
TRICK
REC CHROMA
TO LUMINANCE & CHROMINANCE SECTION PP3003
Q804 MSD601 (AMP)
QR807 MRN1403 (EE ON)
QR803 MRN1404 (MESECAM :ON)
D801 1SS254
D802 1SS254
L306 VLP0099
L307 VLP0099
L305 100μ
Q801 MSD601 (AMP)
IC 302 VEFH14D
BH7505CK1
YNR
DOC
DET
MIX
AGC
NLDE
CLP
W. EX
AMP
PICT
NC2
NC
HP. LIM
KP
HSS
LPF
VCO REF
REC
PB
NLE
DE
BIAS
CL
ME
W/D C
MOD
Y. VCC2
S/P/N
Y. LPF
Y/C. MIX
V2. ON
SCL
MUTE
LOG
V.LEE
Y. VCC
V. REG
FIL-CR
C.VCC1
NR BIAS
CORR
CNR
EDIT
ACK
COMB AMP
C.VCC2
630K BPF
4.43 M B.P.F
B.D.E
COMB. D
B. GEN
BGP
DET
ACC
ACK
C. ACC
M BM B.E
630K LPF
5.06 M BPF
LIM
HP LIM
S.BM
DEM
DO
ENV
ROTARY
D.M.M.
A F C
(CMOS)
S.LOCK
D.VCC
VDD
ITO
LP SP
REC PB PBID
B.G. P.
D.GND
KILL
ID
90°
VXCO
X2
COL B/W NOR
2SC3931
X801 VSX0129
PK302-① REC/PLAY 3.5Vp-p (V-RATE)
PK302-② PLAY 0.3Vp-p (V-RATE)
PK303-⑤ PLAY 0.3Vp-p (V-RATE)
IC302-⑤ REC/PLAY 0.9Vp-p (H-RATE)
IC302-⑤ PLAY 0.5Vp-p (V-RATE)
IC302-⑥ PLAY 0.9Vp-p (H-RATE)
IC302-⑤ REC/PLAY 2.4Vp-p (H-RATE)
IC302-⑤ REC/PLAY 1.0Vp-p (H-RATE)
IC302-⑥ REC 0.8Vp-p (V-RATE)
IC302-⑥ REC/PLAY 4.8Vp-p (H-RATE)
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12

M

MAIN SIGNAL PATH IN PLAYBACK MODE

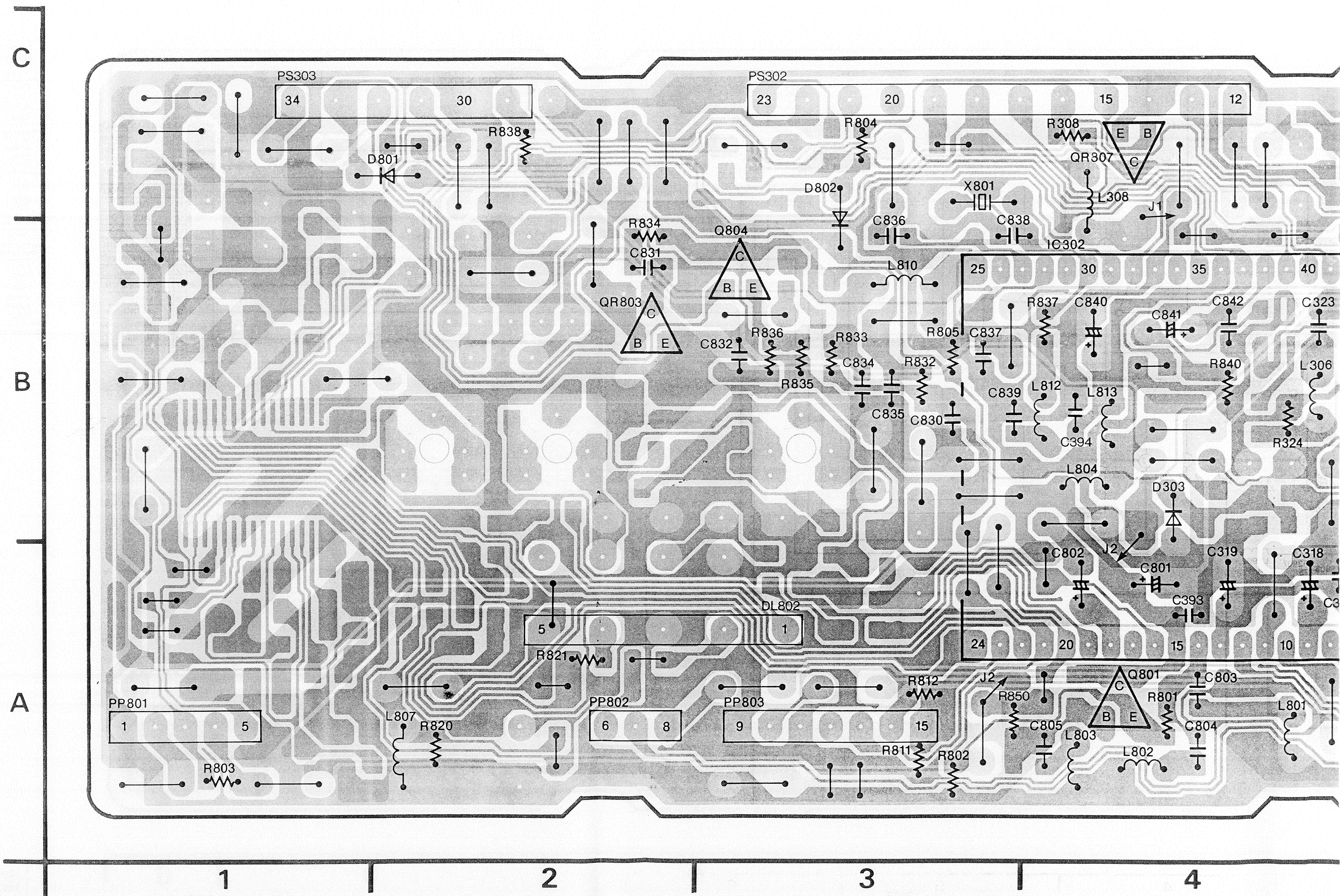

IC 302
VEFH14D
BH7505CK1
Q801
MSD601
(AMP)
DL802
EFDBR124A53T
2H DELAY
1H DELAY
2SC3931
X801
VSX0129
IC302-⑮ REC/PLAY 0.9Vp-p (H-RATE)
IC302-⑱ PLAY 0.5Vp-p (V-RATE)
IC302-⑲ PLAY 0.9Vp-p (H-RATE)
IC302-⑳ REC/PLAY 2.4Vp-p (H-RATE)
IC302-㉑ REC/PLAY 1.0Vp-p (H-RATE)
IC302-㊽ REC 0.8Vp-p (V-RATE)
IC302-㊹ REC/PLAY 4.8Vp-p (H-RATE)
IC302-㉖ REC/PLAY 5.0Vp-p (V-RATE)
IC302-㉚ REC 2.7MHz
IC302-㉕ REC 0.7Vp-p (H-RATE)
(A5)
(A6)
(A2)
(A12)
(A1)
(A16)
(A17)
(B1)
(B2)
(B11)
(B18)
(B20)
(B3)
(B5)
(B6)
(B8)
(B4)
(B10)
(B9)
(B17)
(B16)

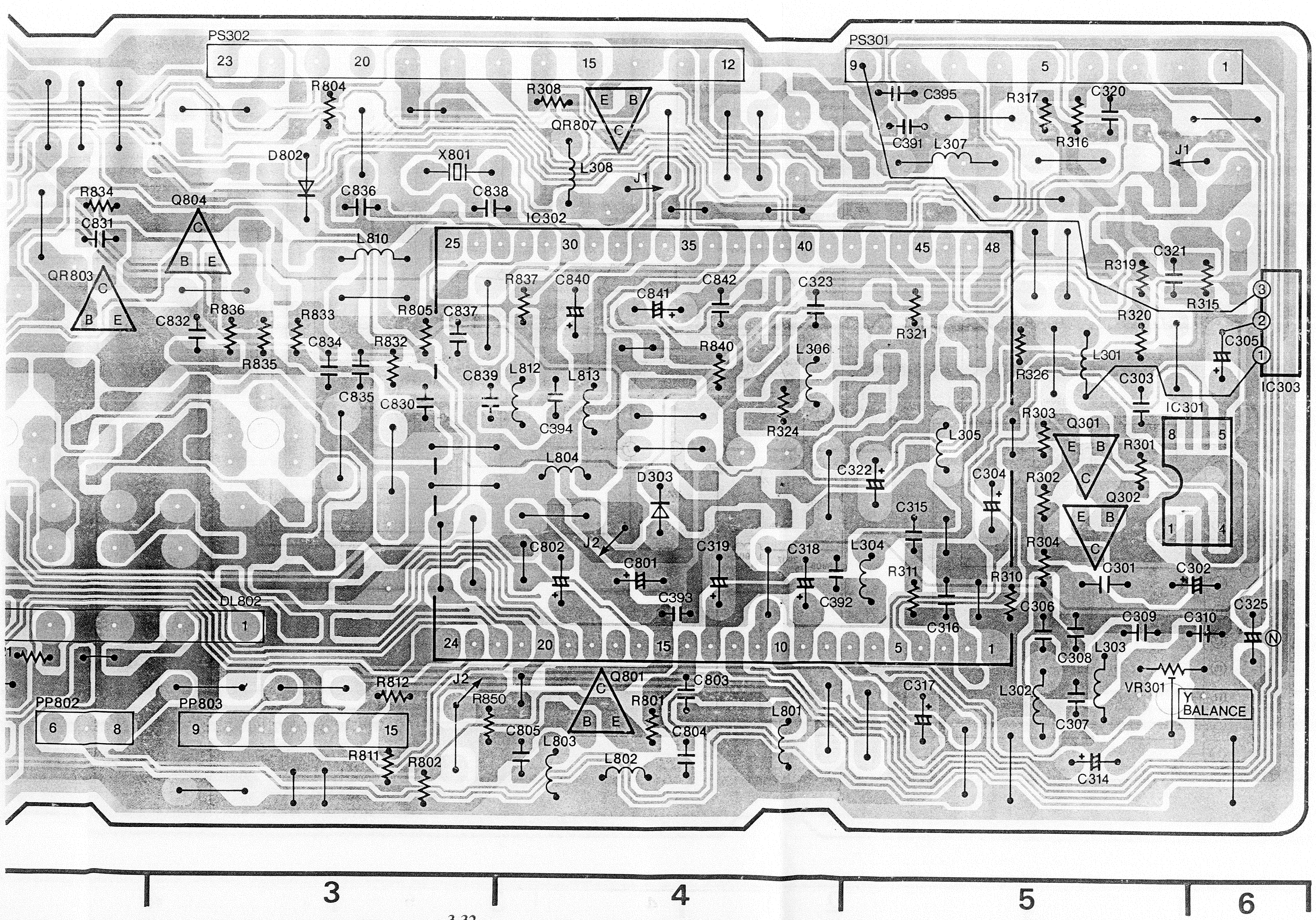
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE; THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

6 7 8 9 10 11 12 13 14 15 16

3-10. LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03928D)


C
B
A
1
2
3
4
PS303
34
30
PS302
23
20
15
12
R838
D801
R804
R308
QR307
E
B
C
X801
D802
L308
J1
C836
C838
IC302
R834
C831
Q804
C
B
E
L810
25
30
35
40
QR803
C
B
E
R837
C840
C841
C842
C323
R805
C837
R836
R833
C832
C834
R835
R832
C839
L812
L813
R840
L306
C835
C830
C394
R324
L804
D303
C802
J2
C801
C319
C318
C393
DL802
5
1
24
20
15
10
R821
R812
J2
Q801
C
B
E
C803
R850
R801
L801
PP801
1
5
PP802
6
8
PP803
9
15
L807
R820
C805
L803
C804
R811
R802
L802
R803

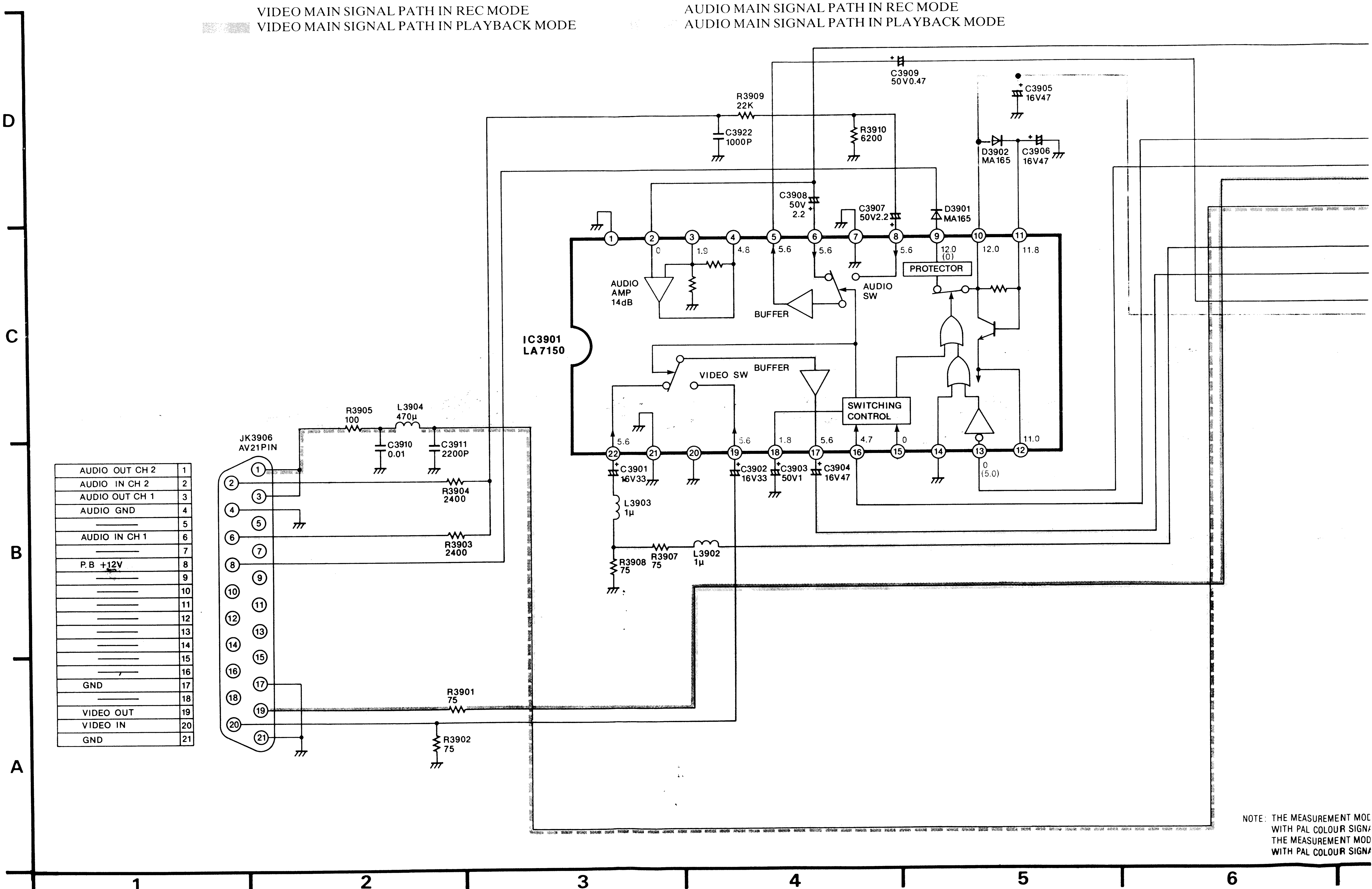

PS302
23
20
15
12
PS301
9
5
1
R804
R308
QR807
E
B
C
L308
J1
D802
X801
C836
C838
IC302
R834
C831
Q804
C
B
E
QR803
C
B
E
L810
25
30
35
40
45
48
C395
C391
L307
R317
C320
R316
J1
R319
C321
R315
R320
③
②
①
C305
IC303
R837
C840
C841
C842
C323
R321
C832
R836
R833
R805
C837
R835
C834
R832
C835
C830
C839
L812
L813
C394
R840
L306
R324
R326
L301
C303
IC301
8
5
1
4
R303
Q301
E
B
C
R301
L305
L804
D303
C322
C304
R302
Q302
E
B
C
C315
C802
J2
C801
C319
C318
L304
R311
R310
R304
C301
C302
C393
C392
C316
C306
C309
C310
C325
Ⓝ
DL802
1
24
20
15
10
5
1
C308
L303
VR301
Y
BALANCE
R812
J2
Q801
C
B
E
C803
R850
R801
L801
C317
L302
C307
PP802
6
8
PP803
9
15
C805
L803
C804
R811
R802
L802
C314
3
4
5
6

LUMINANCE & CHROMINANCE PACK C.B.A.	
Transistor	
Q301 Q302 Q801 Q804	B-5 B-5 A-4 B-3
Transistor & Resistor	
QR803 QR807	B-2 C-4
Integrated Circuit	
IC301 IC302 IC303	B-5 B-4 B-6
Adjustment	
VR301	A-5
Connector	
PP801 PP802 PP803 PS301 PS302 PS303	A-1 A-2 A-3 C-5 C-3 C-1

ADDRESS INFORMATION

Next Page:
INPUT/OUTPUT Section

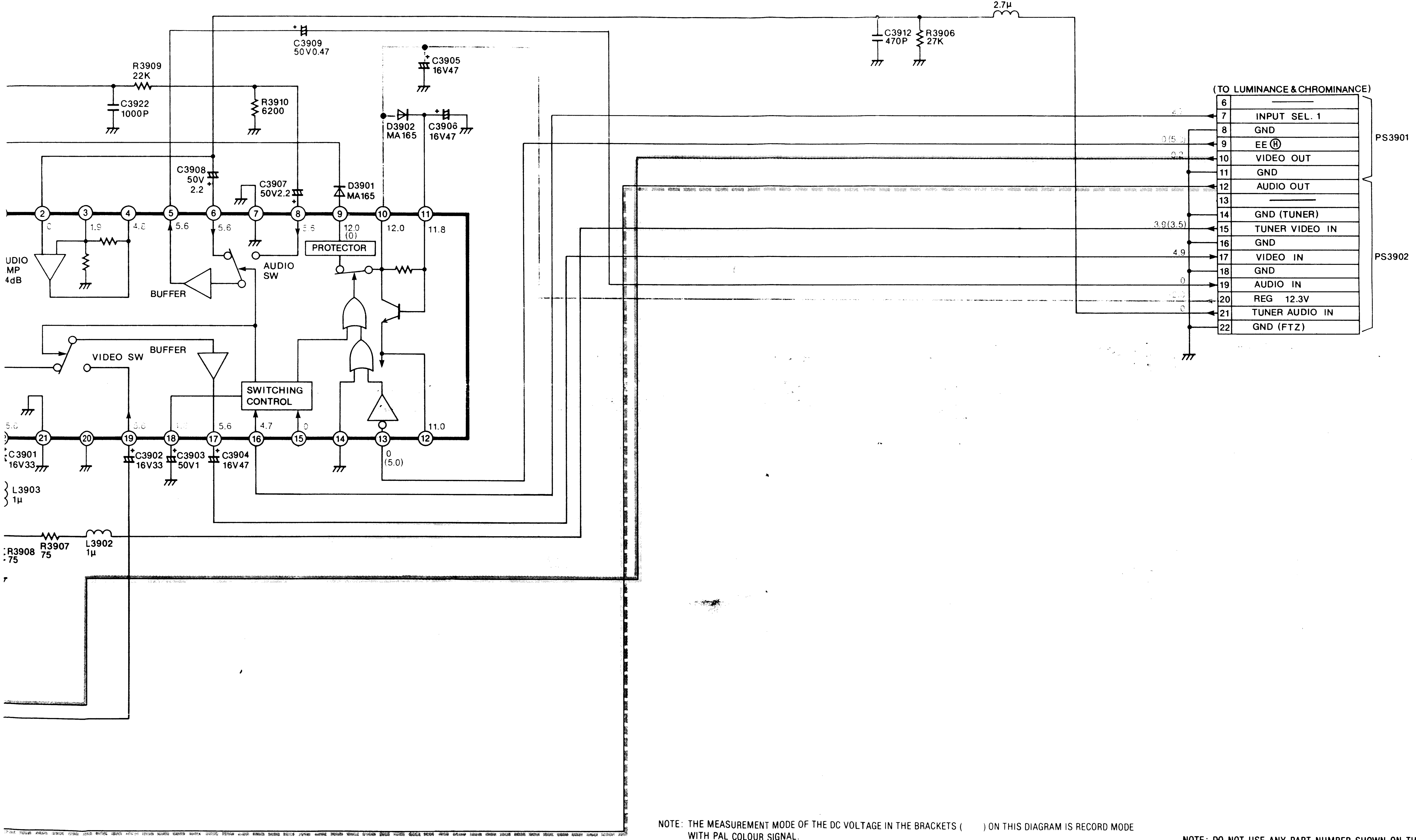
3-11. INPUT/OUTPUT PACK SCHEMATIC DIAGRAM


VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
AUDIO MAIN SIGNAL PATH IN REC MODE
AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE
D
C
B
A
1
2
3
4
5
6
C3909 50V0.47
C3905 16V47
R3909 22K
C3922 1000P
R3910 6200
D3902 MA165
C3906 16V47
C3908 50V 2.2
C3907 50V2.2
D3901 MA165
AUDIO AMP 14dB
BUFFER
AUDIO SW
PROTECTOR
IC3901 LA7150
VIDEO SW
BUFFER
SWITCHING CONTROL
0
1.9
4.8
5.6
5.6
5.6
12.0 (0)
12.0
11.8
5.6
5.6
1.8
5.6
4.7
0
11.0
0 (5.0)
C3901 16V33
C3902 16V33
C3903 50V1
C3904 16V47
L3903 1μ
R3908 75
R3907 75
L3902 1μ
R3905 100
L3904 470μ
C3910 0.01
C3911 2200P
JK3906 AV21PIN
R3904 2400
R3903 2400
R3901 75
R3902 75

AUDIO OUT CH 2	1
AUDIO IN CH 2	2
AUDIO OUT CH 1	3
AUDIO GND	4
———	5
AUDIO IN CH 1	6
———	7
P.B +12V	8
———	9
———	10
———	11
———	12
———	13
———	14
———	15
———	16
GND	17
———	18
VIDEO OUT	19
VIDEO IN	20
GND	21

NOTE: THE MEASUREMENT MOD
WITH PAL COLOUR SIGN
THE MEASUREMENT MOD
WITH PAL COLOUR SIGNA

AUDIO MAIN SIGNAL PATH IN REC MODE
AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE


L3901
2.7µ
C3912
470P
R3906
27K
C3909
50V0.47
C3905
16V47
R3909
22K
C3922
1000P
R3910
6200
D3902
MA165
C3906
16V47
C3908
50V
2.2
C3907
50V2.2
D3901
MA165
UDIO
MP
4dB
BUFFER
AUDIO
SW
PROTECTOR
12.0
(0)
12.0
11.8
1.9
5.6
5.6
VIDEO SW
BUFFER
SWITCHING
CONTROL
5.6
4.7
0
11.0
0
(5.0)
C3901
16V33
C3902
16V33
C3903
50V1
C3904
16V47
L3903
1µ
R3908
75
R3907
75
L3902
1µ
(TO LUMINANCE & CHROMINANCE)
6
7 INPUT SEL. 1
8 GND
9 EE Ⓗ
10 VIDEO OUT
11 GND
12 AUDIO OUT
13
14 GND (TUNER)
15 TUNER VIDEO IN
16 GND
17 VIDEO IN
18 GND
19 AUDIO IN
20 REG 12.3V
21 TUNER AUDIO IN
22 GND (FTZ)
PS3901
PS3902
0(5.0)
3.9(3.5)
4.9
0

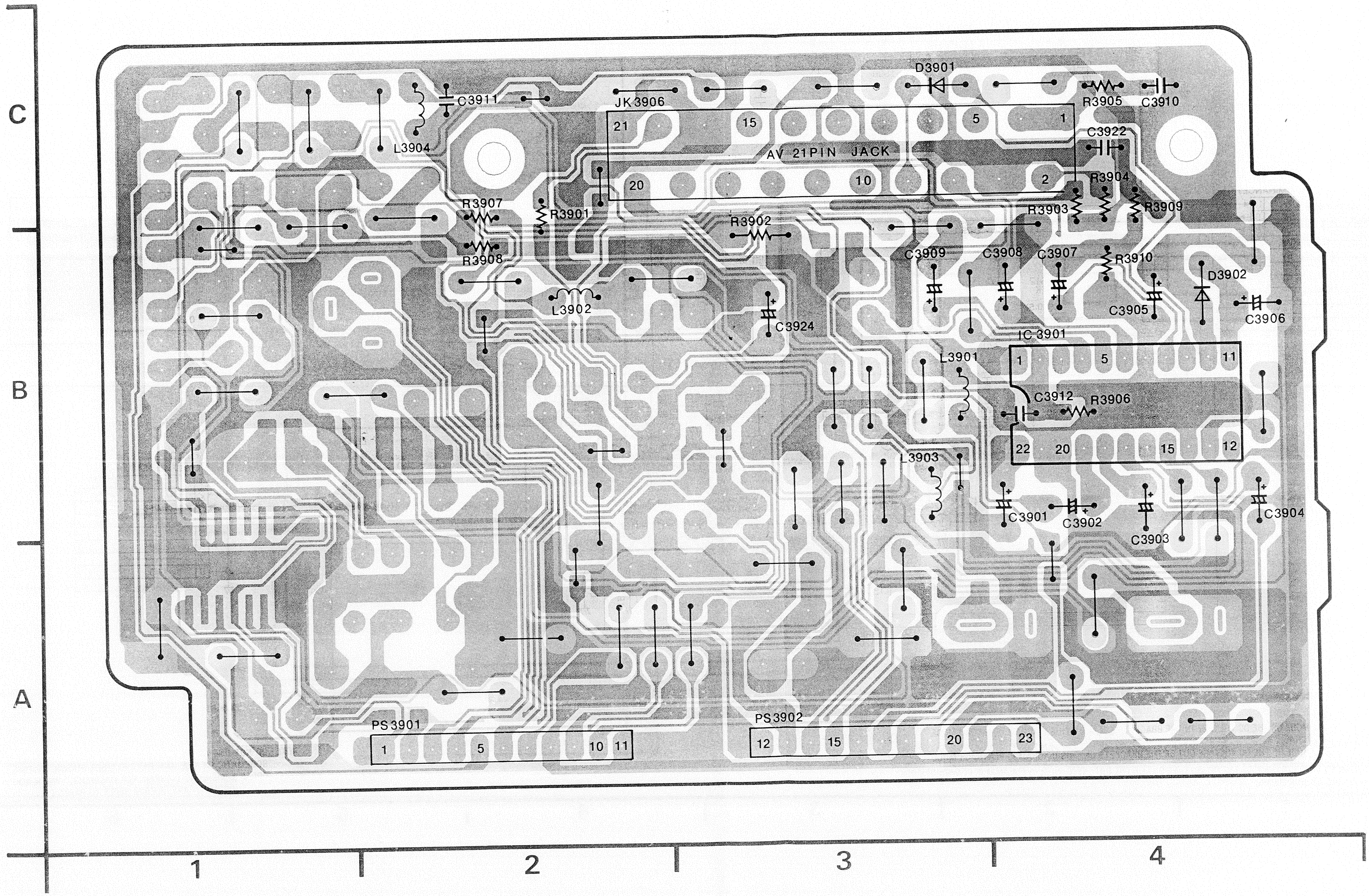
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-12. INPUT/OUTPUT PACK C.B.A. (VEP03883G)

INPUT/OUTPUT PACK C.B.A.	
Integrated Circuit	
IC3901	B-4
Connector	
PS3901 PS3902	A-2 A-3

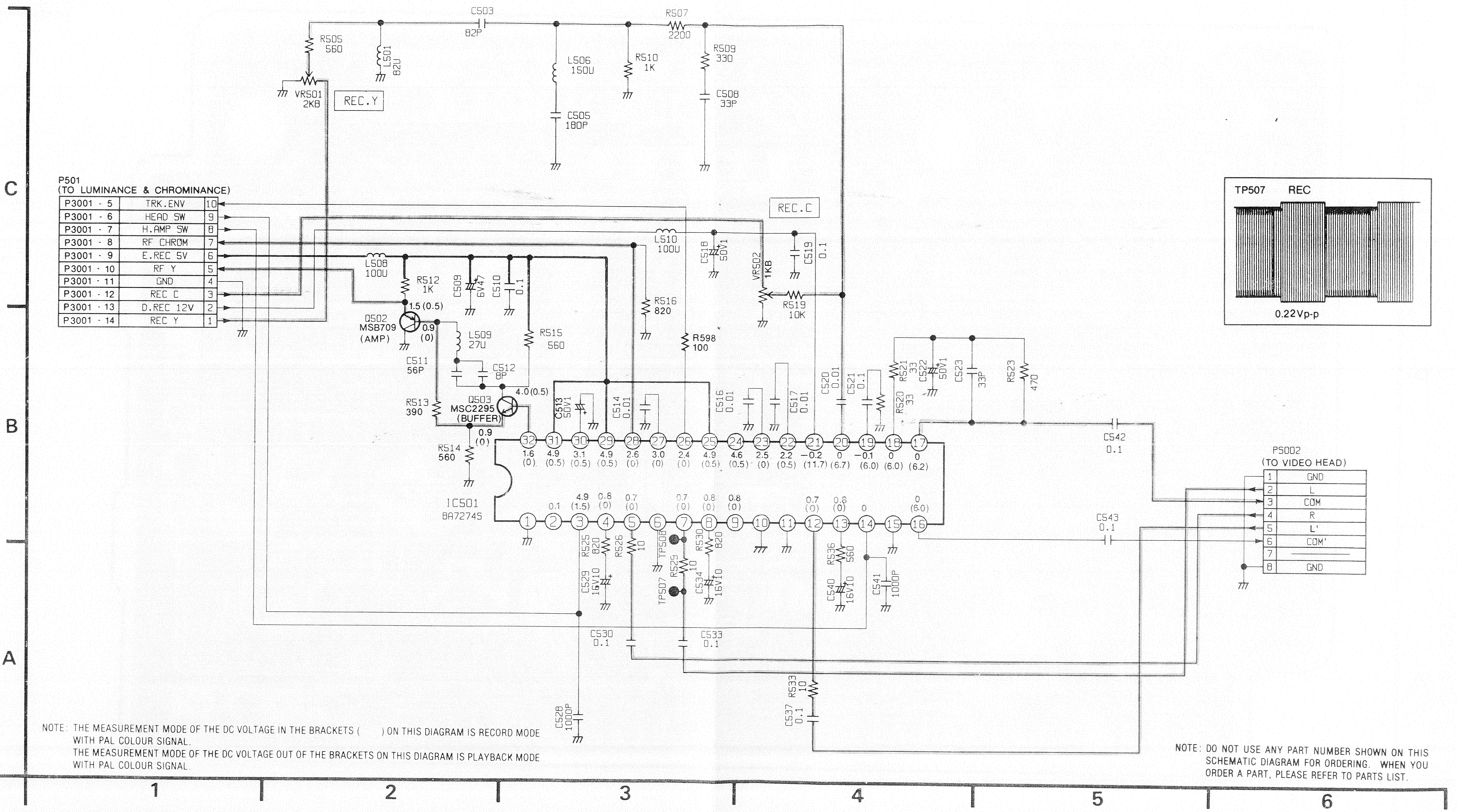
ADDRESS INFORMATION



C
B
A
1
2
3
4
D3901
R3905
C3910
C3911
JK3906
21
15
5
1
L3904
C3922
AV 21PIN JACK
20
10
2
R3904
R3907
R3901
R3903
R3909
R3902
R3908
C3909
C3908
C3907
R3910
D3902
L3902
C3924
C3905
C3906
IC3901
1
5
11
L3901
C3912
R3906
22
20
15
12
L3903
C3901
C3902
C3903
C3904
PS3901
1
5
10
11
PS3902
12
15
20
23

3-13. HEAD AMP SCHEMATIC DIAGRAM

▨ VIDEO MAIN SIGNAL PATH IN REC MODE
▨ VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE


P501
(TO LUMINANCE & CHROMINANCE)
P3001 - 5 TRK.ENV 10
P3001 - 6 HEAD SW 9
P3001 - 7 H.AMP SW 8
P3001 - 8 RF CHROM 7
P3001 - 9 E.REC 5V 6
P3001 - 10 RF Y 5
P3001 - 11 GND 4
P3001 - 12 REC C 3
P3001 - 13 D.REC 12V 2
P3001 - 14 REC Y 1
C503 82P
R507 2200
R505 560
L501 82U
VR501 2KB
REC.Y
L506 150U
C505 180P
R510 1K
R509 330
C508 33P
REC.C
L510 100U
C518 50V1
VR502 1KB
C519 0.1
R519 10K
L508 100U
R512 1K
C509 6V47
C510 0.1
R516 820
R598 100
Q502 MSB709 (AMP)
1.5 (0.5)
0.9 (0)
L509 27U
R515 560
C511 56P
C512 8P
4.0 (0.5)
R513 390
Q503 MSC2295 (BUFFER)
0.9 (0)
R514 560
IC501 BA7274S
C513 50V1
C514 0.01
C516 0.01
C517 0.01
C520 0.01
C521 0.1
R520 33
R521 33
C522 50V1
C523 33P
R523 470
C542 0.1
C543 0.1
1.6 (0) 4.9 (0.5) 3.1 (0.5) 4.9 (0.5) 2.6 (0) 3.0 (0) 2.4 (0) 4.9 (0.5) 4.6 (0.5) 2.5 (0) 2.2 (0.5) -0.2 (11.7) 0 (6.7) -0.1 (6.0) 0 (6.0) 0 (6.2)
0.1 4.9 (1.5) 0.8 (0) 0.7 (0) 0.7 (0) 0.8 (0) 0.8 (0) 0.7 (0) 0.8 (0) 0 0 (6.0)
R525 820
R526 10
TP508
R530 820
R529 10
TP507
C529 16V10
C534 16V10
R536 560
C540 16V10
C541 1000P
C530 0.1
C533 0.1
R533 10
C537 0.1
C528 1000P
PS002
(TO VIDEO HEAD)
1 GND
2 L
3 COM
4 R
5 L'
6 COM'
7
8 GND
TP507 REC
0.22Vp-p
A
B
C
1
2
3
4
5
6

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.

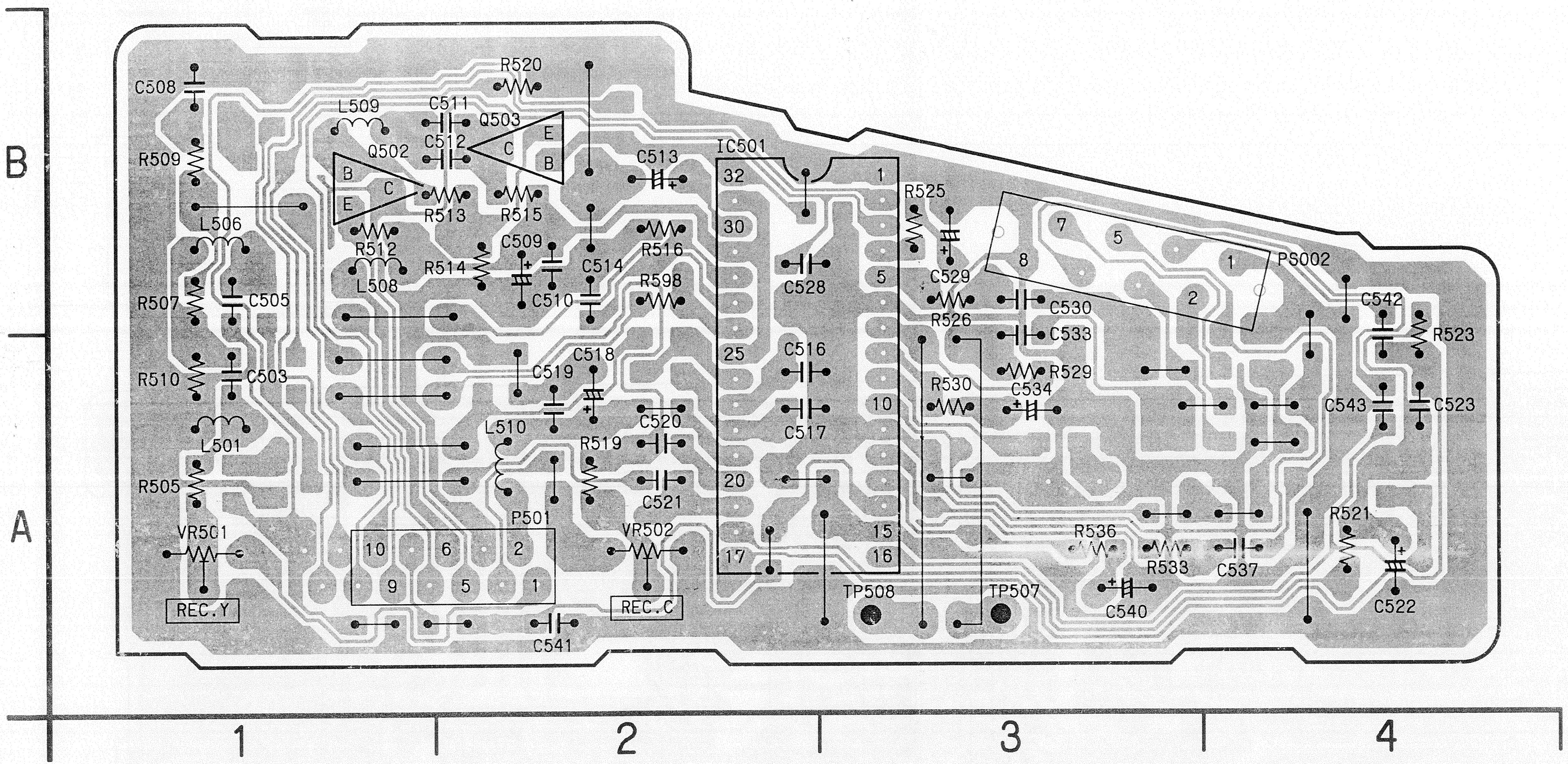
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

Back Page:
INPUT/OUTPUT Section

3-14. HEAD AMP C.B.A. (VEP05167E)

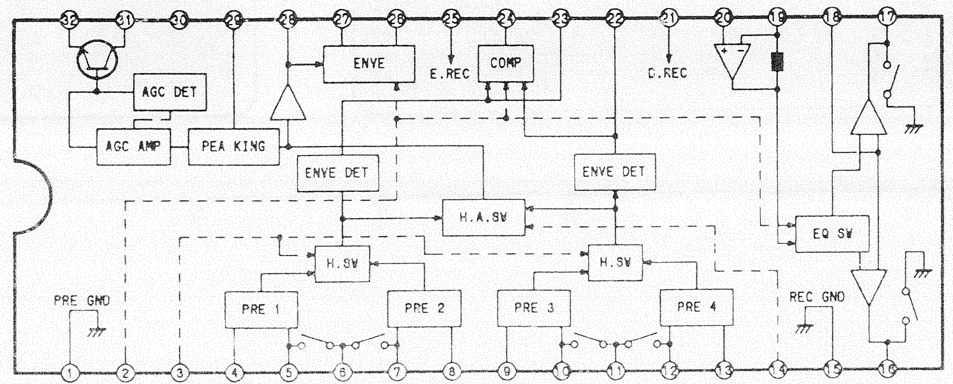
HEAD AMP C.B.A.	
Transistor	
Q502	B-1
Q503	B-2
Integrated Circuit	
IC501	B-2
Test Point	
TP507	A-3
TP508	A-3
Adjustment	
VR501	A-1
VR502	A-2
Connector	
P501	A-2
PS002	B-4

ADDRESS INFORMATION


B
A
1
2
3
4
C508
R520
L509
C511
Q503
C512
Q502
R509
R513
R515
C513
IC501
32
1
30
5
25
10
20
15
17
16
R525
L506
R512
C509
R514
C514
R516
L508
R598
C510
R507
C505
C528
C529
R526
C530
C533
PS002
7
5
8
1
2
C542
R523
R510
C503
C519
C518
C516
R530
R529
C534
C543
C523
L501
L510
C520
C517
R519
R505
C521
P501
10
6
9
R521
VR501
VR502
R536
R533
C537
REC.Y
REC.C
TP508
TP507
C540
C522
C541

IC BLOCK

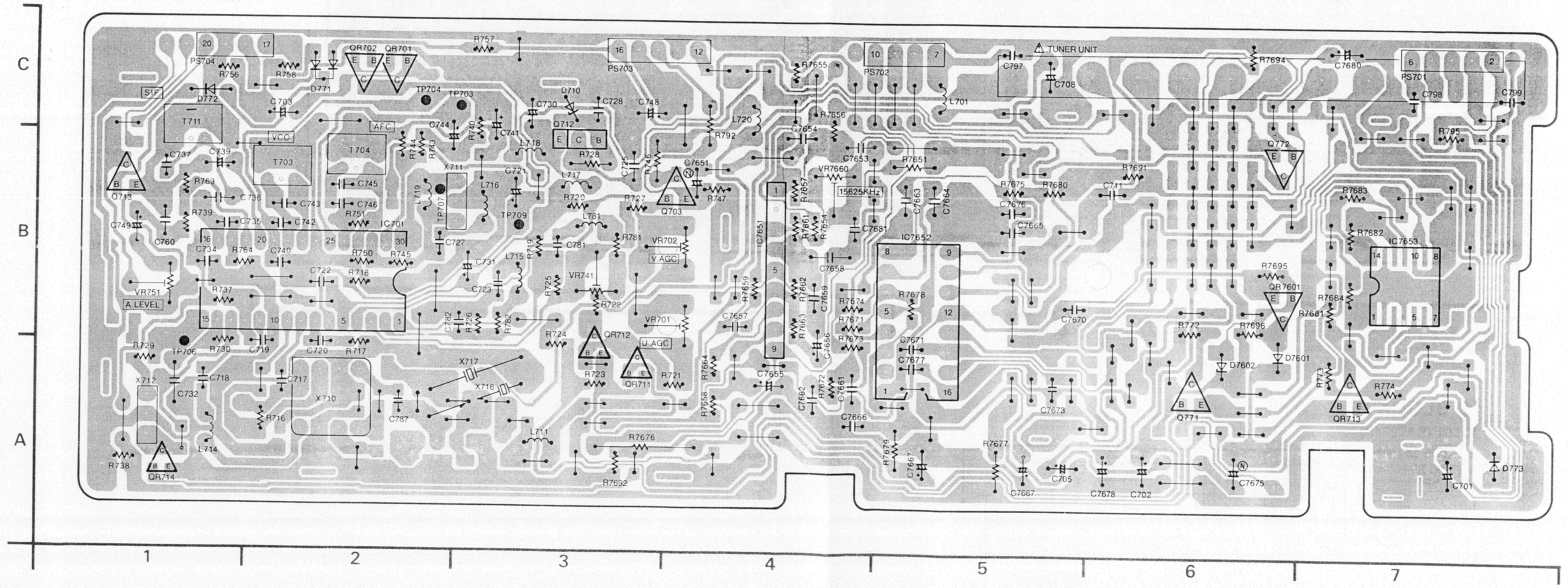
IC501 (BA7274S)


AGC DET
AGC AMP
PEA KING
ENVE
E.REC
COMP
C.REC
ENVE DET
ENVE DET
H.A.SW
H.SW
H.SW
EQ SW
PRE GND
PRE 1
PRE 2
PRE 3
PRE 4
REC GND
32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

3-15. TV DEMODULATOR PACK C.B.A. (VEP07645M)

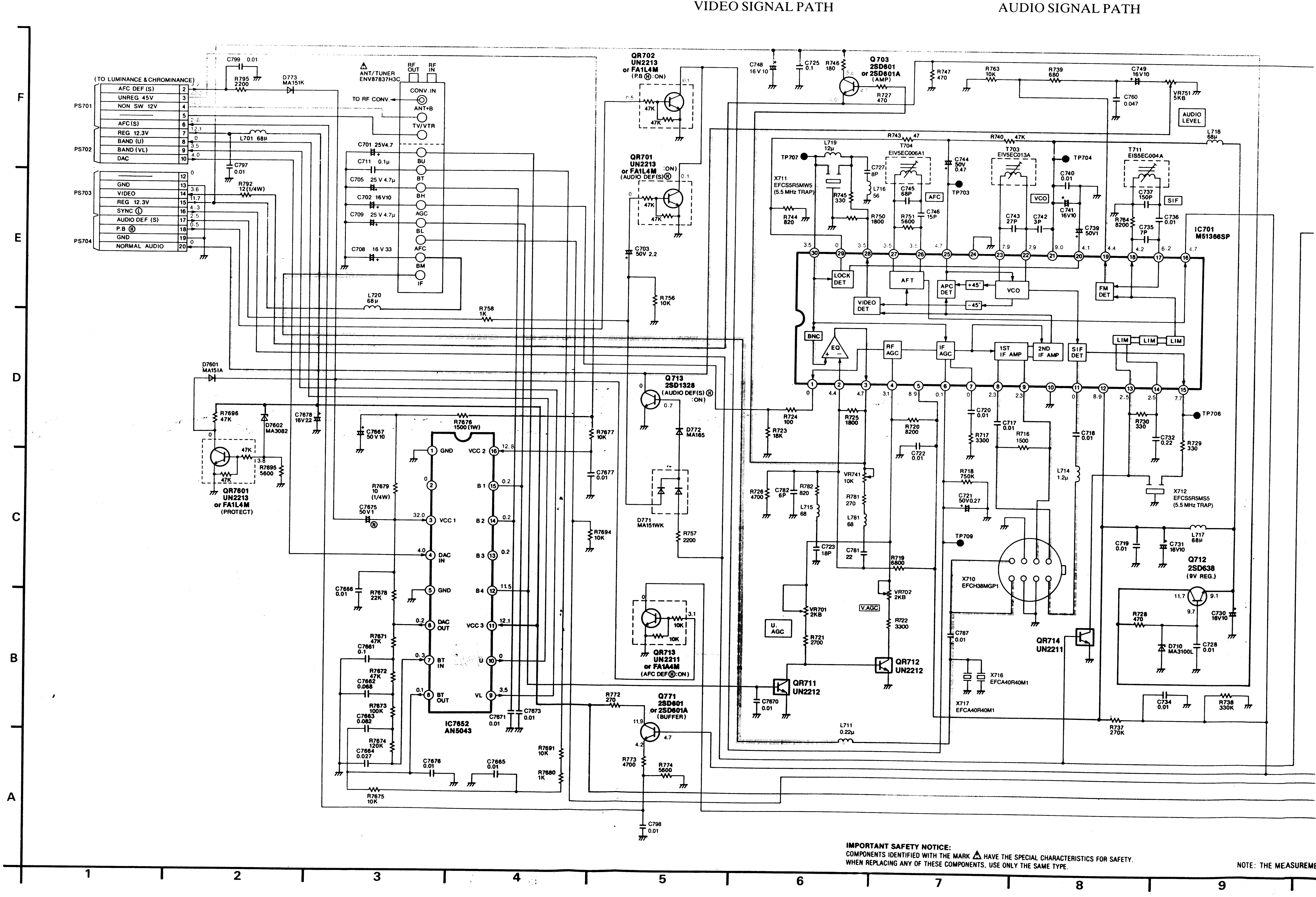
TV DEMODULATOR PACK C.B.A.	
Transistor	
Q703	B-4
Q712	B-3
Q713	B-1
Q771	A-6
Q772	B-6
Transistor & Resistor	
QR701	C-2
QR702	C-2
QR711	A-3
QR712	A-3
QR713	A-7
QR714	A-1
QR7601	B-6
Integrated Circuit	
IC701	B-2
IC7651	B-4
IC7652	B-5
IC7653	B-7
Test Point	
TP703	C-3
TP704	C-2
TP706	A-1
TP707	B-2
TP709	B-3
Adjustment	
T703	B-2
T704	B-2
T711	C-1
VR701	B-4
VR702	B-3
VR741	B-3
VR751	B-1
VR7660	B-4
Connector	
PS701	C-7
PS702	C-5
PS703	C-3
PS704	C-1

ADDRESS INFORMATION


C
B
A
1
2
3
4
5
6
7
PS704
20
17
R756
R758
D771
QR702
QR701
R757
PS703
16
12
R7655
PS702
10
7
TUNER UNIT
C797
C708
R7694
C7680
PS701
6
2
C798
C799
SIF
D772
T711
C703
TP704
TP703
D710
C730
C728
C748
L720
R792
L701
R7656
C7654
VCO
AFC
T703
T704
C744
R740
C741
Q712
E C B
R728
L718
R744
R743
C725
R746
C7651
R747
C7653
R7651
R7691
Q772
R795
Q713
C737
C739
R763
C736
C743
C745
C746
X711
C721
L717
L716
L719
TP707
R720
R727
Q703
VR7660
R7657
15625KHz
C7663
C7664
R7675
R7680
C711
R7683
R739
C735
C742
R751
IC701
TP709
L781
C7676
C7665
C749
C760
16
20
25
30
C727
R781
VR702
V.AGC
IC7651
R7861
R7654
C7681
IC7652
8
9
R7682
IC7653
14
10
8
C734
R764
C740
R750
R745
C731
L715
R719
C781
C722
R718
C723
VR741
R725
R722
C7658
R7695
QR7601
R7659
R7662
C7659
R7678
R7674
VR751
A.LEVEL
R737
C782
R726
R782
R7684
R7681
15
10
5
1
VR701
C7657
R7663
R7671
R7673
C7670
R772
R7696
TP706
R729
R730
C719
C720
R717
R724
QR712
U.AGC
C7656
C7671
C7677
D7602
D7601
R773
X717
R723
QR711
R721
R7664
C7655
R7672
C7661
C7662
1
16
R774
X712
C732
C718
C717
X716
X710
R716
C787
R7658
C7666
C7673
Q771
QR713
L714
L711
R7676
R7679
C7667
R7677
C705
C7678
C702
C7675
C701
D773
R738
QR714
R7692

Back Page:
HEAD AMP Section

3-16. TV DEMODULATOR PACK SCHEMATIC DIAGRAM

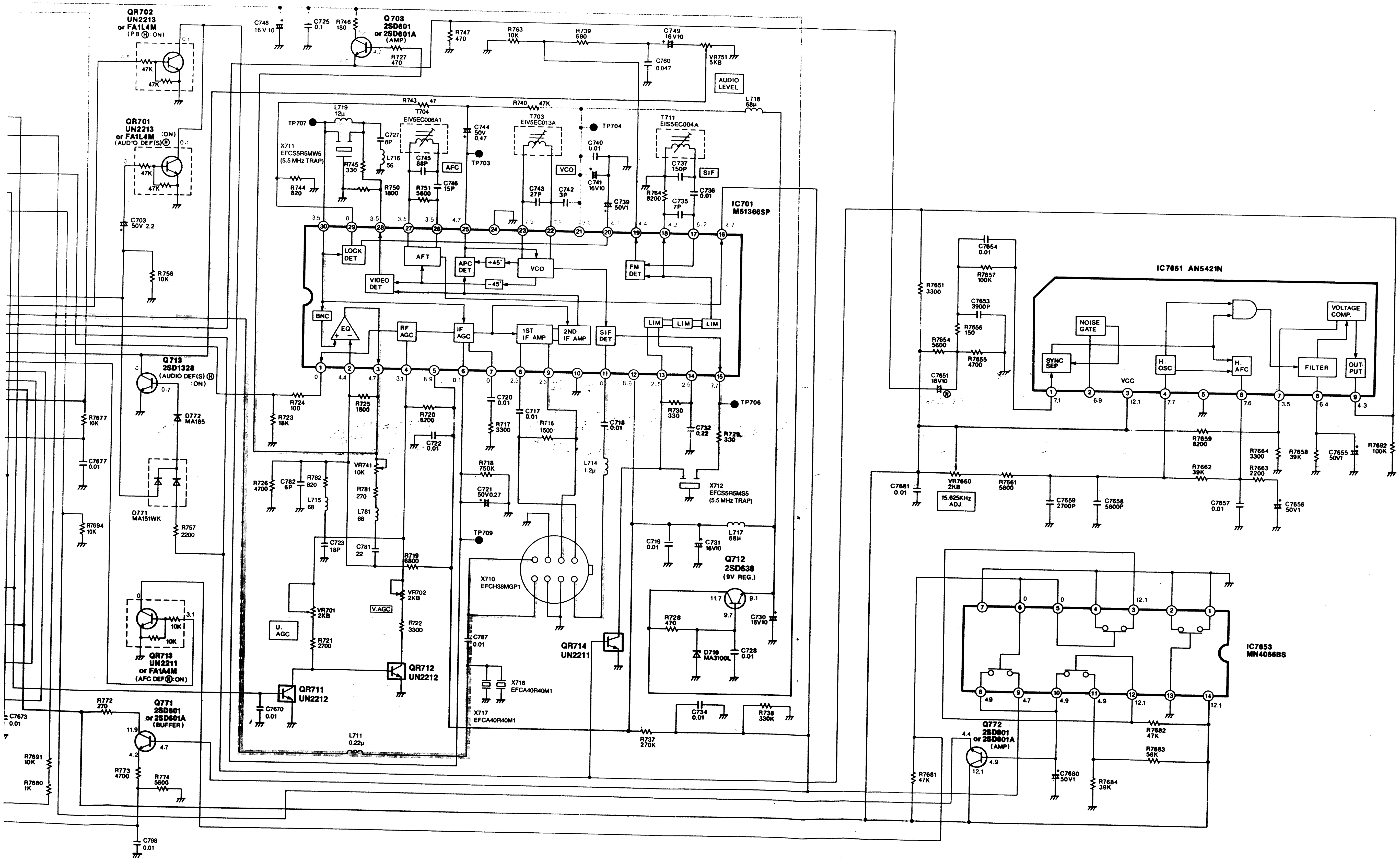

VIDEO SIGNAL PATH
AUDIO SIGNAL PATH
(TO LUMINANCE & CHROMINANCE)
PS701
PS702
PS703
PS704
AFC DEF (S)
UNREG 45V
NON SW 12V
AFC (S)
REG 12.3V
BAND (U)
BAND (VL)
DAC
GND
VIDEO
REG 12.3V
SYNC Ⓛ
AUDIO DEF (S)
P.B Ⓗ
GND
NORMAL AUDIO
C799 0.01
R795 2200
D773 MA151K
ANT/TUNER ENV87837H3C
RF OUT
RF IN
CONV.IN
TO RF CONV.
ANT+B
TV/VTR
BU
BT
BH
AGC
BL
AFC
BM
IF
L701 68μ
C797 0.01
R792 12 (1/4W)
C701 25V4.7
C711 0.1μ
C705 25 V 4.7μ
C702 16V10
C709 25 V 4.7μ
C708 16 V 33
L720 68μ
R758 1K
QR702 UN2213 or FA1L4M (P.B Ⓗ :ON)
QR701 UN2213 or FA1L4M (AUDIO DEF(S)Ⓗ :ON)
47K
C703 50V 2.2
R756 10K
C748 16 V 10
C725 0.1
R746 180
Q703 2SD601 or 2SD601A (AMP)
R727 470
R747 470
R763 10K
R739 680
C749 16V10
VR751 5KB
C760 0.047
AUDIO LEVEL
L718 68μ
TP707
L719 12μ
X711 EFCS5R5MW5 (5.5 MHz TRAP)
R743 47
T704 EIV5EC006A1
C727 8P
L716 56
C745 68P
C746 15P
AFC
C744 50V 0.47
TP703
R745 330
R744 820
R750 1800
R751 5600
R740 47K
T703 EIV5EC013A
C743 27P
C742 3P
VCO
C740 0.01
C741 16V10
C739 50V1
TP704
T711 EIS5EC004A
C737 150P
SIF
R764 8200
C735 7P
C736 0.01
IC701 M51366SP
LOCK DET
VIDEO DET
AFT
APC DET
+45°
-45°
VCO
FM DET
BNC
EQ
RF AGC
IF AGC
1ST IF AMP
2ND IF AMP
SIF DET
LIM
D7601 MA151A
R7696 47K
D7602 MA3082
C7678 16V22
QR7601 UN2213 or FA1L4M (PROTECT)
R7695 5600
C7667 50V10
R7676 1500 (1W)
R7677 10K
C7677 0.01
R7679 10 (1/4W)
C7675 50V1
GND
VCC 2
B1
VCC 1
B2
DAC IN
B3
B4
DAC OUT
VCC 3
BT IN
U
BT OUT
VL
IC7652 AN5043
R7694 10K
C7666 0.01
R7678 22K
R7671 47K
C7661 0.1
R7672 47K
C7662 0.068
R7673 100K
C7663 0.082
R7674 120K
C7664 0.027
C7676 0.01
C7665 0.01
C7671 0.01
C7673 0.01
R7691 10K
R7680 1K
R7675 10K
Q713 2SD1328 (AUDIO DEF(S) Ⓗ :ON)
D772 MA165
D771 MA151WK
R757 2200
QR713 UN2211 or FA1A4M (AFC DEF Ⓗ :ON)
R772 270
Q771 2SD601 or 2SD601A (BUFFER)
R773 4700
R774 5600
C798 0.01
R724 100
R723 18K
R725 1800
R720 8200
C722 0.01
C720 0.01
R717 3300
C717 0.01
R716 1500
C718 0.01
R730 330
C732 0.22
R729 330
TP706
VR741 10K
R726 4700
C782 6P
R782 820
L715 68
R781 270
L781 68
C723 18P
C781 22
R719 6800
R718 750K
C721 50V0.27
L714 1.2μ
X712 EFCS5R5MS5 (5.5 MHz TRAP)
TP709
X710 EFCH38MGP1
VR701 2KB
R721 2700
U. AGC
V.AGC
VR702 2KB
R722 3300
QR712 UN2212
QR711 UN2212
C7670 0.01
C787 0.01
X716 EFCA40R40M1
X717 EFCA40R40M1
QR714 UN2211
C719 0.01
C731 16V10
L717 68μ
Q712 2SD638 (9V REG.)
R728 470
C730 16V10
D710 MA3100L
C728 0.01
C734 0.01
R738 330K
R737 270K
L711 0.22μ
A
B
C
D
E
F
1
2
3
4
5
6
7
8
9

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE: THE MEASUREME

VIDEO SIGNAL PATH

AUDIO SIGNAL PATH


QR702
UN2213
or FA1L4M
(P.B Ⓗ:ON)
47K
QR701
UN2213
or FA1L4M :ON)
(AUDIO DEF(S)Ⓗ
C703
50V 2.2
R756
10K
Q713
2SD1328
(AUDIO DEF(S) Ⓗ
:ON)
D772
MA165
D771
MA151WK
R757
2200
R7677
10K
C7677
0.01
R7694
10K
QR713
UN2211
or FA1A4M
(AFC DEF Ⓗ:ON)
10K
R772
270
Q771
2SD601
or 2SD601A
(BUFFER)
R773
4700
R774
5600
C798
0.01
C7673
0.01
R7691
10K
R7680
1K
C748
16V 10
C725
0.1
R746
180
Q703
2SD601
or 2SD601A
(AMP)
R727
470
R747
470
R763
10K
R739
680
C749
16V10
C760
0.047
VR751
5KB
AUDIO
LEVEL
L718
68µ
R743 47
T704
EIV5EC006A1
R740 47K
T703
EIV5EC013A
TP704
T711
EIS5EC004A
TP707
L719
12µ
C727
8P
X711
EFCS5R5MW5
(5.5 MHz TRAP)
R745
330
L716
56
C745
68P
AFC
C744
50V
0.47
TP703
C740
0.01
VCO
C741
16V10
C737
150P
SIF
R744
820
R750
1800
R751
5600
C746
15P
C743
27P
C742
3P
C739
50V1
R764
8200
C735
7P
C736
0.01
IC701
M51366SP
LOCK
DET
AFT
APC
DET
+45°
-45°
VCO
VIDEO
DET
FM
DET
BNC
EQ
RF
AGC
IF
AGC
1ST
IF AMP
2ND
IF AMP
SIF
DET
LIM
LIM
LIM
R724
100
R723
18K
R725
1800
R720
8200
C722
0.01
C720
0.01
R717
3300
C717
0.01
R716
1500
C718
0.01
R730
330
C732
0.22
R729
330
TP706
L714
1.2µ
R718
750K
C721
50V0.27
VR741
10K
R781
270
L781
68
R726
4700
C782
6P
R782
820
L715
68
X712
EFCS5R5MS5
(5.5 MHz TRAP)
C723
18P
C781
22
R719
6800
TP709
X710
EFCH38MGP1
C719
0.01
C731
16V10
L717
68µ
Q712
2SD638
(9V REG.)
VR701
2KB
V.AGC
VR702
2KB
R722
3300
U.
AGC
R721
2700
C787
0.01
QR714
UN2211
R728
470
C730
16V10
D710
MA3100L
C728
0.01
QR712
UN2212
QR711
UN2212
X716
EFCA40R40M1
X717
EFCA40R40M1
C7670
0.01
L711
0.22µ
C734
0.01
R738
330K
R737
270K
C7654
0.01
R7657
100K
IC7651 AN5421N
R7651
3300
C7653
3900P
R7656
150
R7654
5600
R7655
4700
C7651
16V10
NOISE
GATE
SYNC
SEP
H.
OSC
H.
AFC
FILTER
VOLTAGE
COMP.
OUT-
PUT
VCC
R7659
8200
R7664
3300
R7658
39K
C7655
50V1
R7692
100K
R7662
39K
R7663
2200
C7681
0.01
VR7660
2KB
15.625KHz
ADJ.
R7661
5600
C7659
2700P
C7658
5600P
C7657
0.01
C7656
50V1
IC7653
MN4066BS
R7682
47K
R7683
56K
Q772
2SD601
or 2SD601A
(AMP)
R7681
47K
C7680
50V1
R7684
39K

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

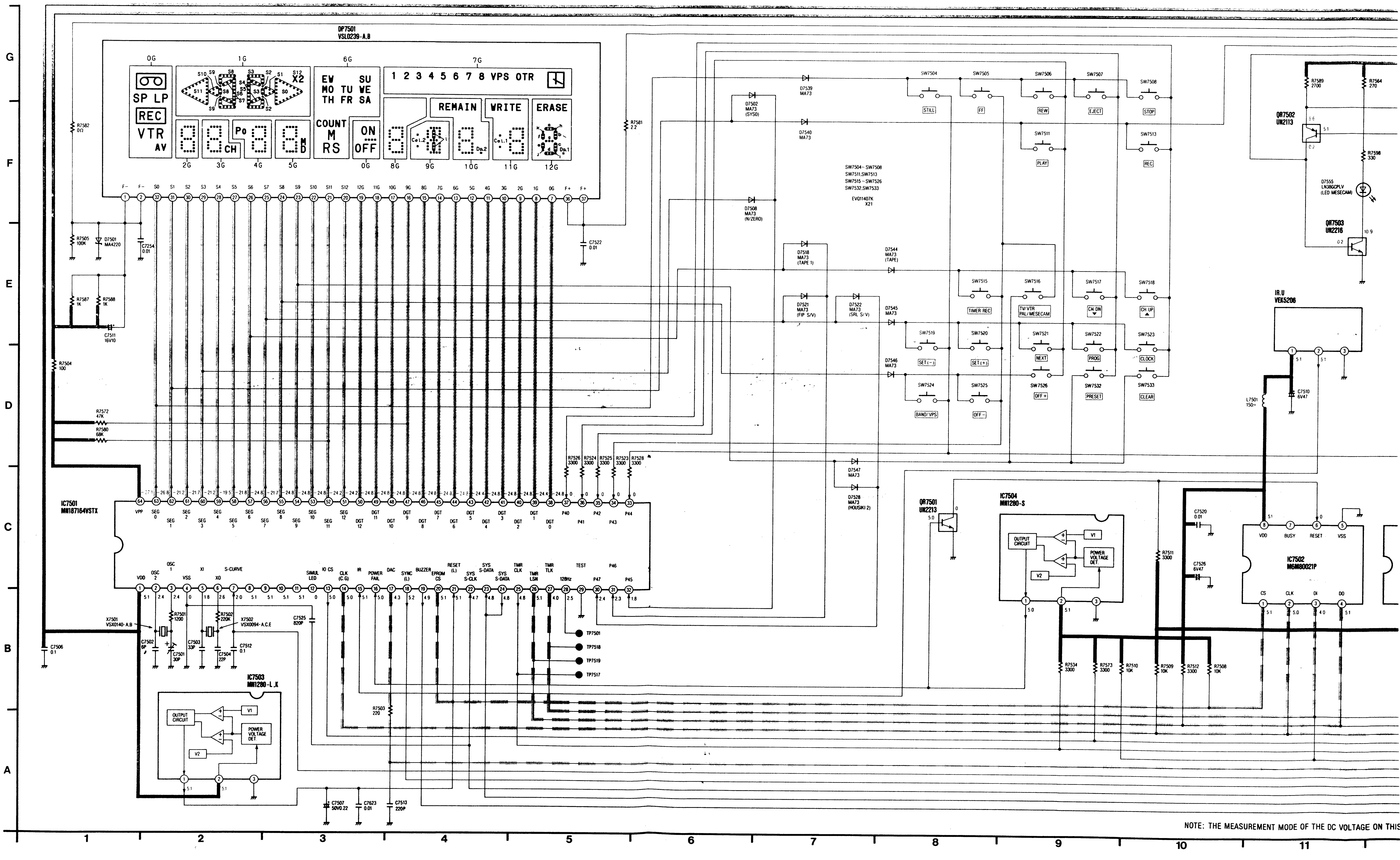
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

5 6 7 8 9 10 11 12 13

Next Page:
TIMER & OPERATION Section

3-17. TIMER & OPERATION SCHEMATIC DIAGRAM

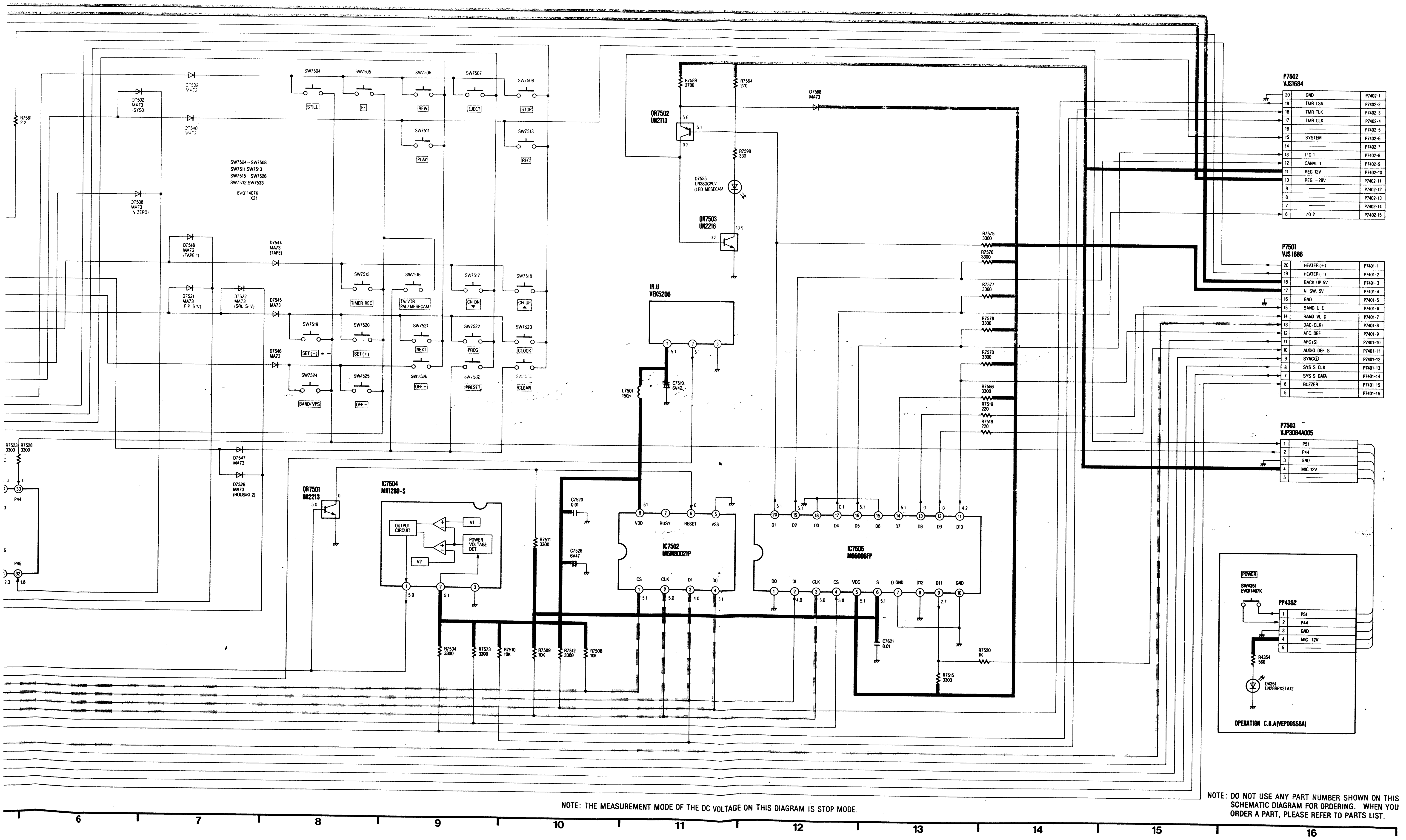
SEGMENT CONTROL SIGNAL ▨ GRID CONTROL SIGNAL TUNE CONTR



DP7501
VSL0239-A.B
0G
1G
6G
7G
SP LP
REC
VTR
AV
EW SU
MO TU WE
TH FR SA
COUNT
M
RS
ON
OFF
1 2 3 4 5 6 7 8 VPS OTR
REMAIN
WRITE
ERASE
CH
Po
2G
3G
4G
5G
8G
9G
10G
11G
12G
F- F- S0 S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12 12G 11G 10G 9G 8G 7G 6G 5G 4G 3G 2G 1G 0G F+ F+
IC7501
MN187164VSTX
VPP
SEG 0
SEG 1
SEG 2
SEG 3
SEG 4
SEG 5
SEG 6
SEG 7
SEG 8
SEG 9
SEG 10
SEG 11
SEG 12
DGT 12
DGT 11
DGT 10
DGT 9
DGT 8
DGT 7
DGT 6
DGT 5
DGT 4
DGT 3
DGT 2
DGT 1
DGT 0
P40
P41
P42
P43
P44
VDD
OSC 2
OSC 1
VSS
XI
XO
S-CURVE
SIMUL LED
IO CS
CLK (C.G)
IR
POWER FAIL
DAC
SYNC (L)
BUZZER
EPROM CS
RESET (L)
SYS S-CLK
SYS S-DATA
TMR CLK
TMR LSN
TMR TLK
128Hz
TEST
P46
P47
P45
X7501
VSX0140-A.B
X7502
VSX0094-A.C.E
R7501 1200
R7502 220K
C7502 6P
C7501 30P
C7503 33P
C7504 22P
C7512 0.1
C7525 820P
C7506 0.1
IC7503
MN1280-L.K
OUTPUT CIRCUIT
POWER VOLTAGE DET
V1
V2
R7503 220
C7507 50V0.22
C7623 0.01
C7513 220P
TP7501
TP7518
TP7519
TP7517
R7582 0Ω
R7505 100K
D7501 MA4220
C7254 0.01
R7587 1K
R7588 1K
C7511 16V10
R7504 100
R7572 47K
R7580 68K
C7522 0.01
R7581 2.2
R7526 3300
R7524 3300
R7525 3300
R7523 3300
R7528 3300
D7502 MA73 (SYSO)
D7539 MA73
D7540 MA73
D7508 MA73 (N/ZERO)
D7518 MA73 (TAPE 1)
D7521 MA73 (FIP S/V)
D7522 MA73 (SRL S/V)
D7544 MA73 (TAPE)
D7545 MA73
D7546 MA73
D7547 MA73
D7528 MA73 (HOUSIKI 2)
SW7504 STILL
SW7505 FF
SW7506 REW
SW7507 EJECT
SW7508 STOP
SW7511 PLAY
SW7513 REC
SW7504~SW7508
SW7511,SW7513
SW7515~SW7526
SW7532,SW7533
EVQ11407K
X21
SW7515 TIMER REC
SW7516 TV/VTR PAL/MESECAM
SW7517 CH DN
SW7518 CH UP
SW7519 SET(-)
SW7520 SET(+)
SW7521 NEXT
SW7522 PROG
SW7523 CLOCK
SW7524 BAND/VPS
SW7525 OFF-
SW7526 OFF+
SW7532 PRESET
SW7533 CLEAR
QR7501
UN2213
IC7504
MN1280-S
C7520 0.01
C7526 6V47
R7511 3300
R7534 3300
R7573 3300
R7510 10K
R7509 10K
R7512 3300
R7508 10K
IC7502
M6M80021P
VDD
BUSY
RESET
VSS
CS
CLK
DI
DO
IR.U
VEK5206
L7501 150μ
C7510 6V47
QR7502
UN2113
QR7503
UN2216
R7589 2700
R7564 270
R7598 330
D7555
LN38GCPLV
(LED MESECAM)
A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
10
11

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS

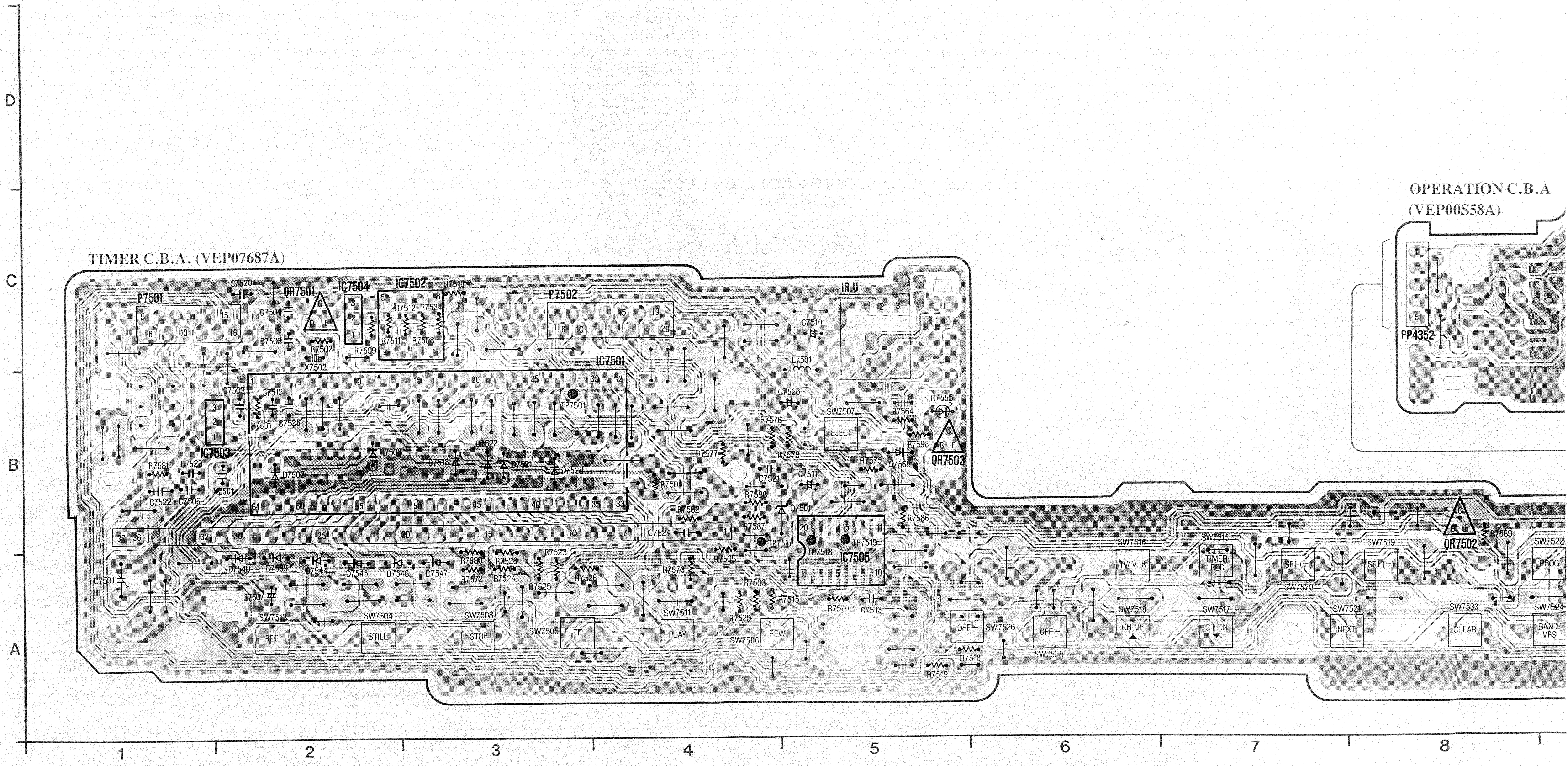
SEGMENT CONTROL SIGNAL ▨ GRID CONTROL SIGNAL ▨ TUNE CONTROL SIGNAL


R7581 2.2
D7539 MA73
D7502 MA73 (SYS0)
D7540 MA73
D7508 MA73 (N ZERO)
SW7504
SW7505
SW7506
SW7507
SW7508
STILL
FF
REW
EJECT
STOP
SW7511
SW7513
PLAY
REC
SW7504~SW7508
SW7511.SW7513
SW7515~SW7526
SW7532.SW7533
EVQ11407K X21
D7518 MA73 (TAPE 1)
D7544 MA73 (TAPE)
D7521 MA73 (FIP S/V)
D7522 MA73 (SRL S/V)
D7545 MA73
D7546 MA73
SW7515
SW7516
SW7517
SW7518
TIMER REC
TV/VTR PAL/MESECAM
CH DN ▼
CH UP ▲
SW7519
SW7520
SW7521
SW7522
SW7523
SET(−)
SET(+)
NEXT
PROG
CLOCK
SW7524
SW7525
SW7526
SW7532
SW7533
BAND/VPS
OFF−
OFF+
PRESET
CLEAR
R7523 3300
R7528 3300
P44
P45
D7547 MA73
D7528 MA73 (HOUSIKI 2)
QR7501 UN2213
IC7504 MN1280-S
OUTPUT CIRCUIT
V1
V2
POWER VOLTAGE DET.
R7534 3300
R7573 3300
R7510 10K
R7509 10K
R7512 3300
R7508 10K
R7511 3300
C7520 0.01
C7526 6V47
R7589 2700
R7564 270
QR7502 UN2113
D7568 MA73
R7598 330
D7555 LN38GCPLV (LED MESECAM)
QR7503 UN2216
IR.U VEK5206
L7501 150μ
C7510 6V47
IC7502 M6M80021P
VDD BUSY RESET VSS
CS CLK DI DO
IC7505 M66006FP
D1 D2 D3 D4 D5 D6 D7 D8 D9 D10
DO DI CLK CS VCC S D GND D12 D11 GND
C7621 0.01
R7520 1K
R7515 3300
R7575 3300
R7576 3300
R7577 3300
R7578 3300
R7570 3300
R7586 3300
R7519 220
R7518 220
P7602 VJS1684
20 GND P7402-1
19 TMR LSN P7402-2
18 TMR TLK P7402-3
17 TMR CLK P7402-4
16 —— P7402-5
15 SYSTEM P7402-6
14 —— P7402-7
13 I/O 1 P7402-8
12 CANAL 1 P7402-9
11 REG 12V P7402-10
10 REG −29V P7402-11
9 —— P7402-12
8 —— P7402-13
7 —— P7402-14
6 I/O 2 P7402-15
P7501 VJS1686
20 HEATER(+) P7401-1
19 HEATER(−) P7401-2
18 BACK UP 5V P7401-3
17 N. SW. 5V P7401-4
16 GND P7401-5
15 BAND. U. E P7401-6
14 BAND. VL. D P7401-7
13 DAC(CLK) P7401-8
12 AFC. DEF P7401-9
11 AFC(S) P7401-10
10 AUDIO. DEF. S P7401-11
9 SYNC(L) P7401-12
8 SYS S. CLK P7401-13
7 SYS S. DATA P7401-14
6 BUZZER P7401-15
5 —— P7401-16
P7503 VJP3084A005
1 P51
2 P44
3 GND
4 MIC 12V
5 ——
POWER
SW4351 EVQ11407K
PP4352
1 P51
2 P44
3 GND
4 MIC 12V
5 ——
R4354 560
D4351 LN28RPX2TA12
OPERATION C.B.A(VEP00S58A)
6
7
8
9
10
11
12
13
14
15
16

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

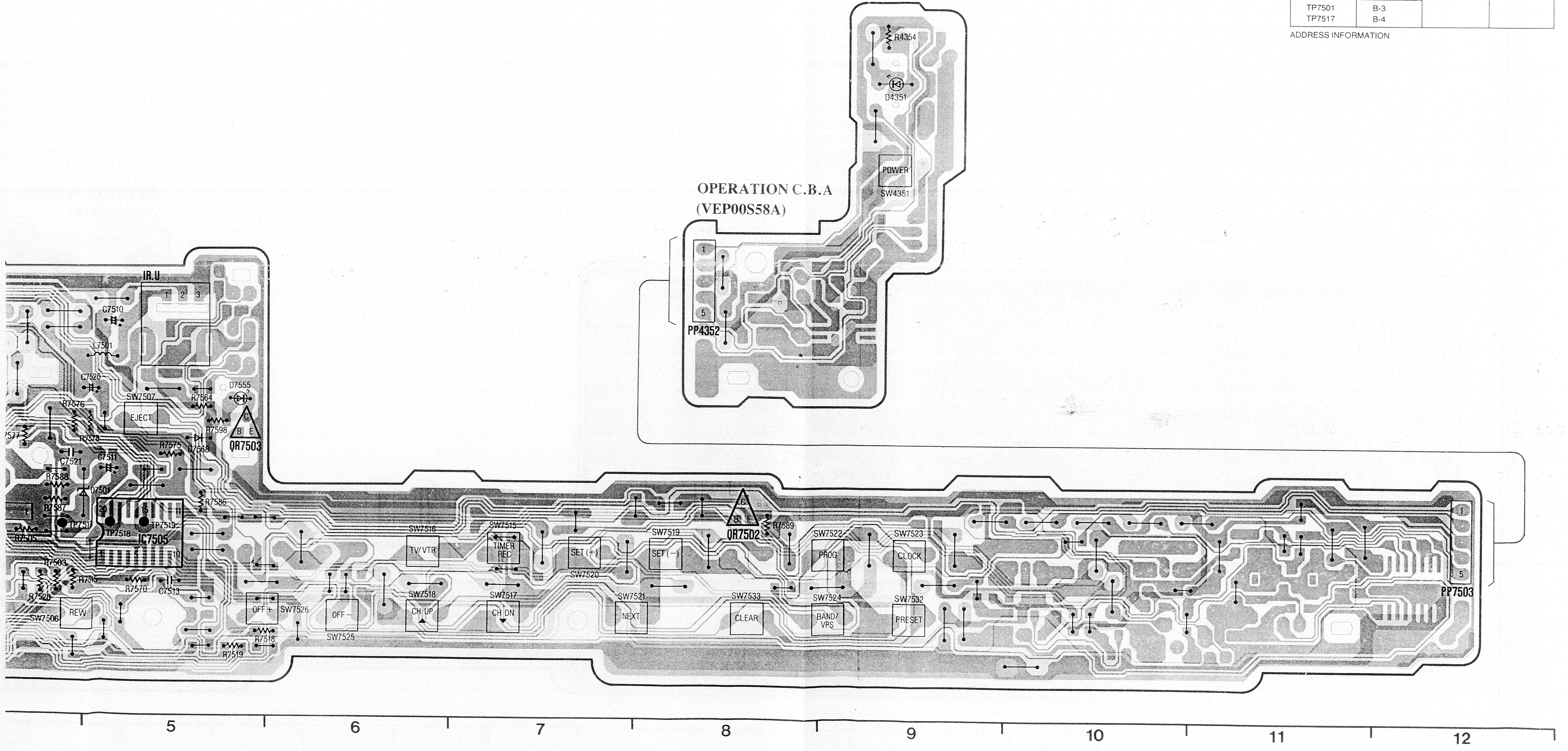
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-18. TIMER C.B.A. (VEP07687A) & OPERATION C.B.A. (VEP00S58A)


OPERATION C.B.A
(VEP00S58A)
TIMER C.B.A. (VEP07687A)
PP4352
P7501
P7502
IC7501
IC7502
IC7503
IC7504
IC7505
QR7501
QR7502
QR7503
IR.U
X7501
X7502
L7501
TP7501
TP7517
TP7518
TP7519
D7501
D7502
D7508
D7518
D7521
D7522
D7528
D7539
D7540
D7544
D7545
D7546
D7547
D7555
D7568
C7501
C7502
C7503
C7504
C7506
C7507
C7510
C7511
C7512
C7513
C7520
C7521
C7522
C7523
C7524
C7525
C7526
R7501
R7502
R7503
R7504
R7505
R7508
R7509
R7510
R7511
R7512
R7515
R7518
R7519
R7520
R7523
R7524
R7525
R7526
R7528
R7534
R7564
R7570
R7572
R7573
R7575
R7576
R7577
R7578
R7580
R7581
R7582
R7586
R7587
R7588
R7589
R7598
SW7504
STILL
SW7505
FF
SW7506
REW
SW7507
EJECT
SW7508
STOP
SW7511
PLAY
SW7513
REC
SW7515
TIMER REC
SW7516
TV/VTR
SW7517
CH DN
SW7518
CH UP
SW7519
SET(−)
SW7520
SET(+)
SW7521
NEXT
SW7522
PROG
SW7524
BAND/VPS
SW7525
OFF−
SW7526
OFF+
SW7533
CLEAR
A
B
C
D
1
2
3
4
5
6
7
8

TIMER C.B.A. & OPERATION C.B.A.	
Transistor & Resistor	
QR7501	C-2
QR7502	B-8
QR7503	B-5
Integrated Circuit	
IC7501	C-4
IC7502	C-3
IC7503	B-2
IC7504	C-2
IC7505	A-5
Test Point	
TP7501	B-3
TP7517	B-4
TP7518	B-5
TP7519	B-5
Adjustment	
C7501	A-1
Connector	
P7501	C-1
P7502	C-3
PP4352	C-8
PP7503	A-12

ADDRESS INFORMATION



OPERATION C.B.A
(VEP00S58A)

IR.U
1 2 3
C7510
L7501
C7526
R7576
SW7507
EJECT
R7564
D7555
R7598
QR7503
R7577
R7578
R7575
R7568
C7521
C7511
R7588
D7501
R7587
TP7517
TP7518
TP7519
IC7505
R7586
R7503
R7570
C7513
R7520
SW7506
REW
OFF +
SW7526
OFF −
SW7525
R7518
R7519
SW7516
TV/VTR
SW7518
CH UP
SW7515
TIMER REC
SW7517
CH DN
SET (+)
SW7520
SW7519
SET (−)
SW7521
NEXT
QR7502
R7589
SW7533
CLEAR
SW7522
PROG
SW7524
BAND/VPS
SW7523
CLOCK
SW7532
PRESET
PP7503
R4354
D4351
POWER
SW4351
PP4352
5
6
7
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9
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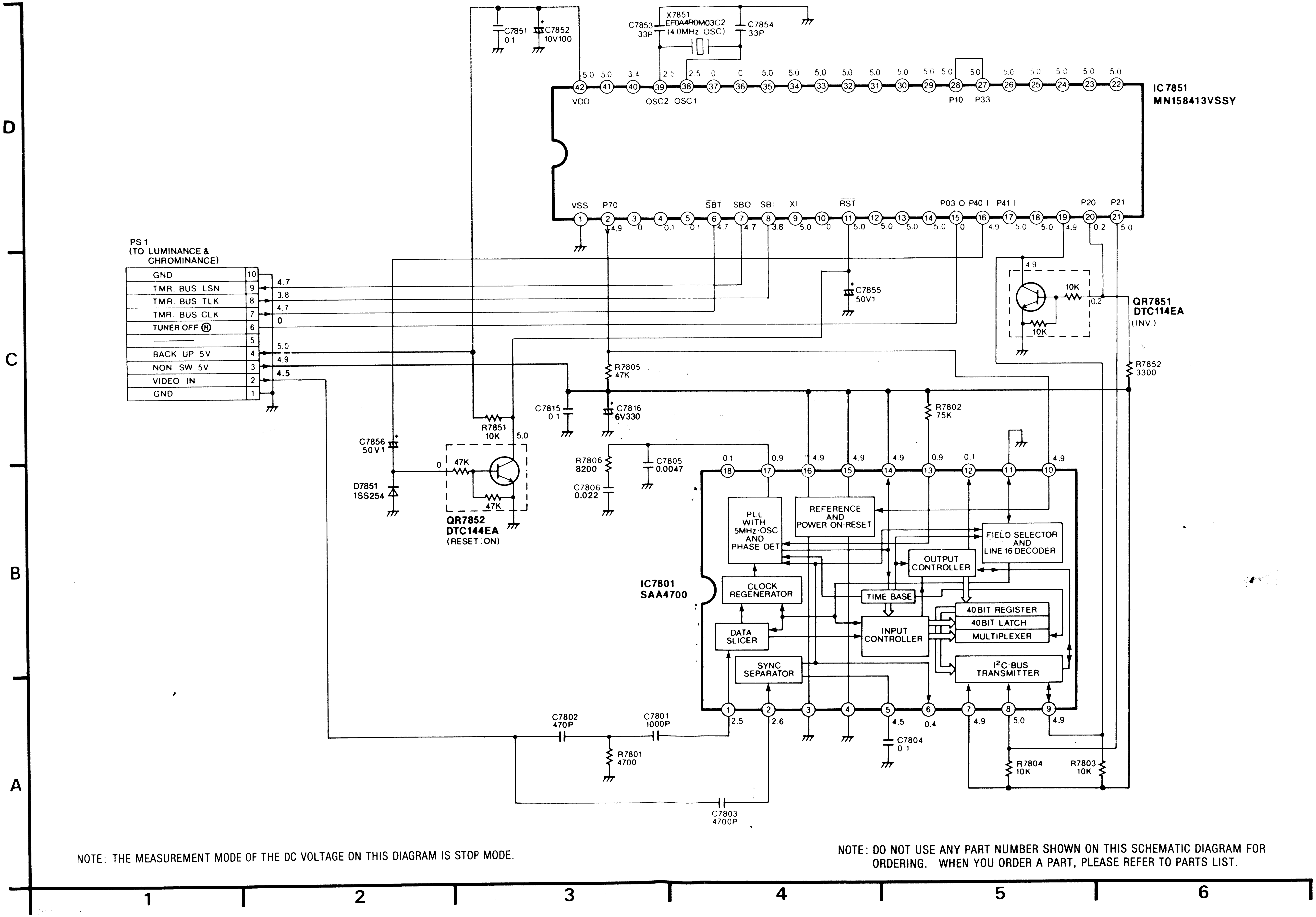
11
12

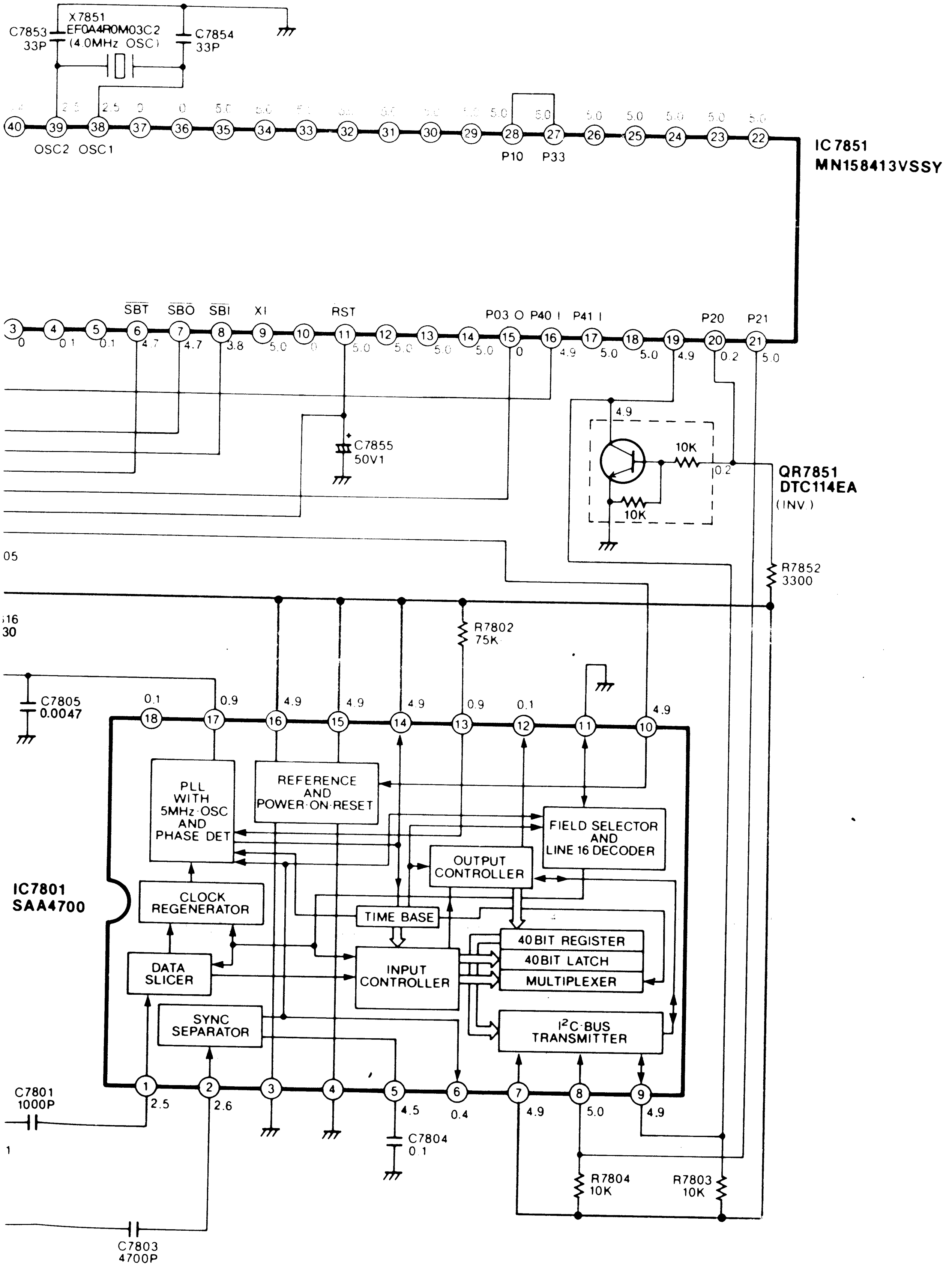
Next Page:
VPS PACK Section

3-19. VPS PACK SCHEMATIC DIAGRAM


IC7851
MN158413VSSY
VDD
OSC2 OSC1
P10 P33
VSS P70 SBT SBO SBI XI RST P03 O P40 I P41 I P20 P21
X7851
EF0A4R0M03C2
(4.0MHz OSC)
C7853 33P
C7854 33P
C7851 0.1
C7852 10V100
PS1
(TO LUMINANCE & CHROMINANCE)
GND
TMR. BUS LSN
TMR. BUS TLK
TMR. BUS CLK
TUNER OFF Ⓗ
BACK UP 5V
NON SW 5V
VIDEO IN
GND
C7855 50V1
QR7851
DTC114EA
(INV)
10K
R7852 3300
R7805 47K
C7815 0.1
C7816 6V330
R7802 75K
R7851 10K
C7856 50V1
D7851 1SS254
47K
QR7852
DTC144EA
(RESET:ON)
R7806 8200
C7805 0.0047
C7806 0.022
IC7801
SAA4700
PLL WITH 5MHz OSC AND PHASE DET
REFERENCE AND POWER-ON-RESET
FIELD SELECTOR AND LINE 16 DECODER
OUTPUT CONTROLLER
CLOCK REGENERATOR
TIME BASE
40BIT REGISTER
40BIT LATCH
MULTIPLEXER
DATA SLICER
INPUT CONTROLLER
SYNC SEPARATOR
I²C-BUS TRANSMITTER
C7802 470P
C7801 1000P
R7801 4700
C7803 4700P
C7804 0.1
R7804 10K
R7803 10K
D
C
B
A
1
2
3
4
5
6

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

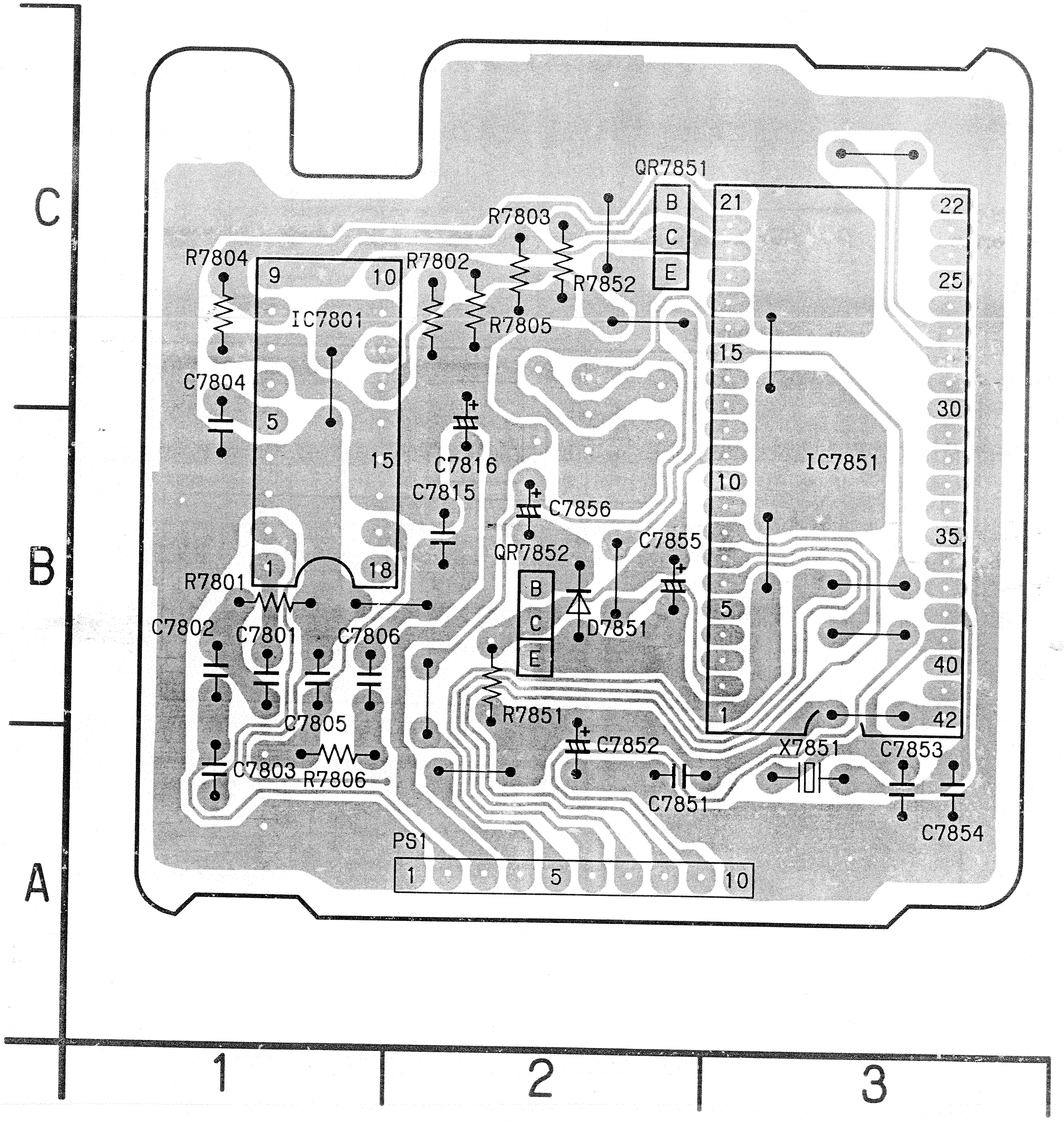

X7851
EF0A4R0M03C2
(4.0MHz OSC)
C7853
33P
C7854
33P
OSC2
OSC1
P10
P33
IC7851
MN158413VSSY
SBT
SBO
SBI
XI
RST
P03 O
P40 I
P41 I
P20
P21
C7855
50V1
QR7851
DTC114EA
(INV.)
10K
10K
R7852
3300
R7802
75K
C7805
0.0047
PLL
WITH
5MHz OSC
AND
PHASE DET
REFERENCE
AND
POWER-ON-RESET
FIELD SELECTOR
AND
LINE 16 DECODER
OUTPUT
CONTROLLER
IC7801
SAA4700
CLOCK
REGENERATOR
TIME BASE
40BIT REGISTER
40BIT LATCH
MULTIPLEXER
DATA
SLICER
INPUT
CONTROLLER
SYNC
SEPARATOR
I²C-BUS
TRANSMITTER
C7801
1000P
C7804
0.1
R7804
10K
R7803
10K
C7803
4700P

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-20. VPS PACK C.B.A. (VEP07538G)

VPS PACK C.B.A.	
Transistor & Resistor	
QR7851 QR7852	C-2 B-2
Integrated Circuit	
IC7801 IC7851	C-1 B-3
Connector	
PS1	A-2

ADDRESS INFORMATION



C
B
A
1
2
3
QR7851
B
C
E
R7803
R7804
R7802
R7852
R7805
IC7801
9
10
5
15
1
18
C7804
C7816
C7815
C7856
21
22
25
15
30
IC7851
10
35
5
40
1
42
QR7852
C7855
D7851
R7801
C7802
C7801
C7806
C7805
C7803
R7806
R7851
C7852
C7851
X7851
C7853
C7854
PS1
1
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3-21. INTERCONNECTION SCHEMATIC DIAGRAM

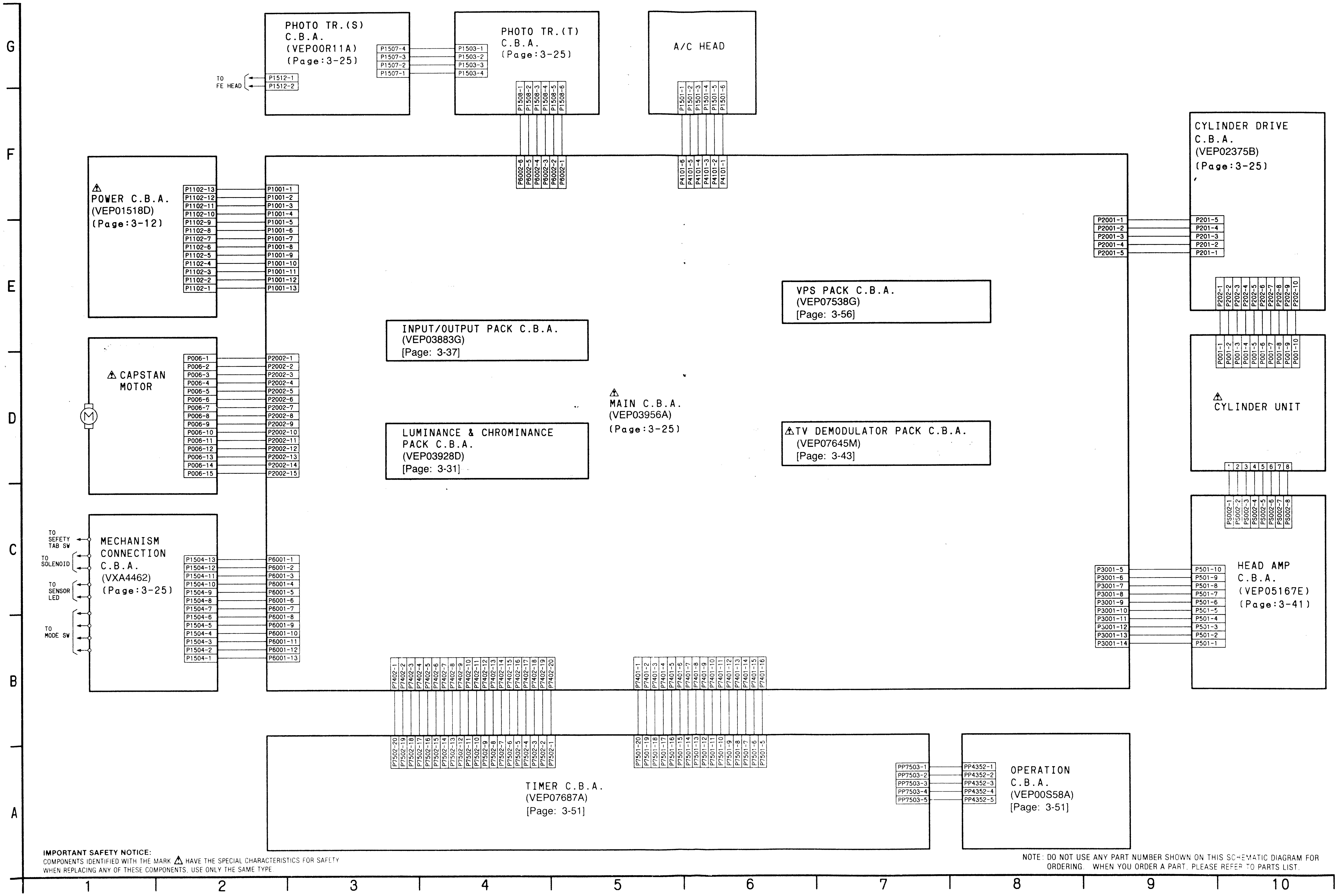
PHOTO TR.(S) C.B.A. (VEP00R11A) (Page:3-25)
TO FE HEAD
PHOTO TR.(T) C.B.A. (Page:3-25)
A/C HEAD
CYLINDER DRIVE C.B.A. (VEP02375B) (Page:3-25)
POWER C.B.A. (VEP01518D) (Page:3-12)
CAPSTAN MOTOR
M
MECHANISM CONNECTION C.B.A. (VXA4462) (Page:3-25)
TO SEFETY TAB SW
TO SOLENOID
TO SENSOR LED
TO MODE SW
INPUT/OUTPUT PACK C.B.A. (VEP03883G) [Page: 3-37]
LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03928D) [Page: 3-31]
MAIN C.B.A. (VEP03956A) (Page:3-25)
VPS PACK C.B.A. (VEP07538G) [Page: 3-56]
TV DEMODULATOR PACK C.B.A. (VEP07645M) [Page: 3-43]
CYLINDER UNIT
HEAD AMP C.B.A. (VEP05167E) (Page:3-41)
TIMER C.B.A. (VEP07687A) [Page: 3-51]
OPERATION C.B.A. (VEP00S58A) [Page: 3-51]
G
F
E
D
C
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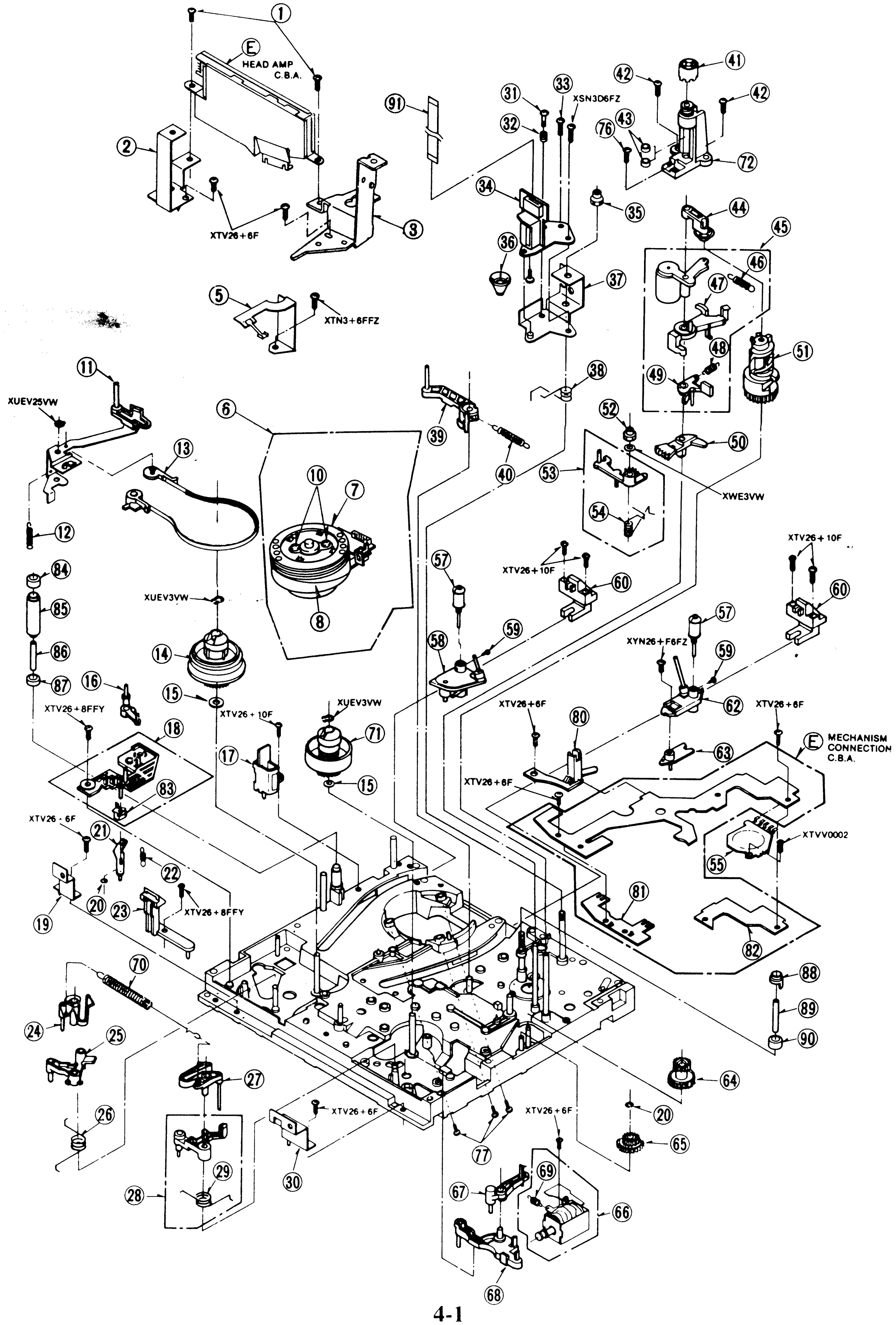
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

SECTION 4
EXPLODED VIEWS & PARTS LIST

4-1. EXPLODED VIEW & MECHANICAL REPLACEMENT PARTS LIST

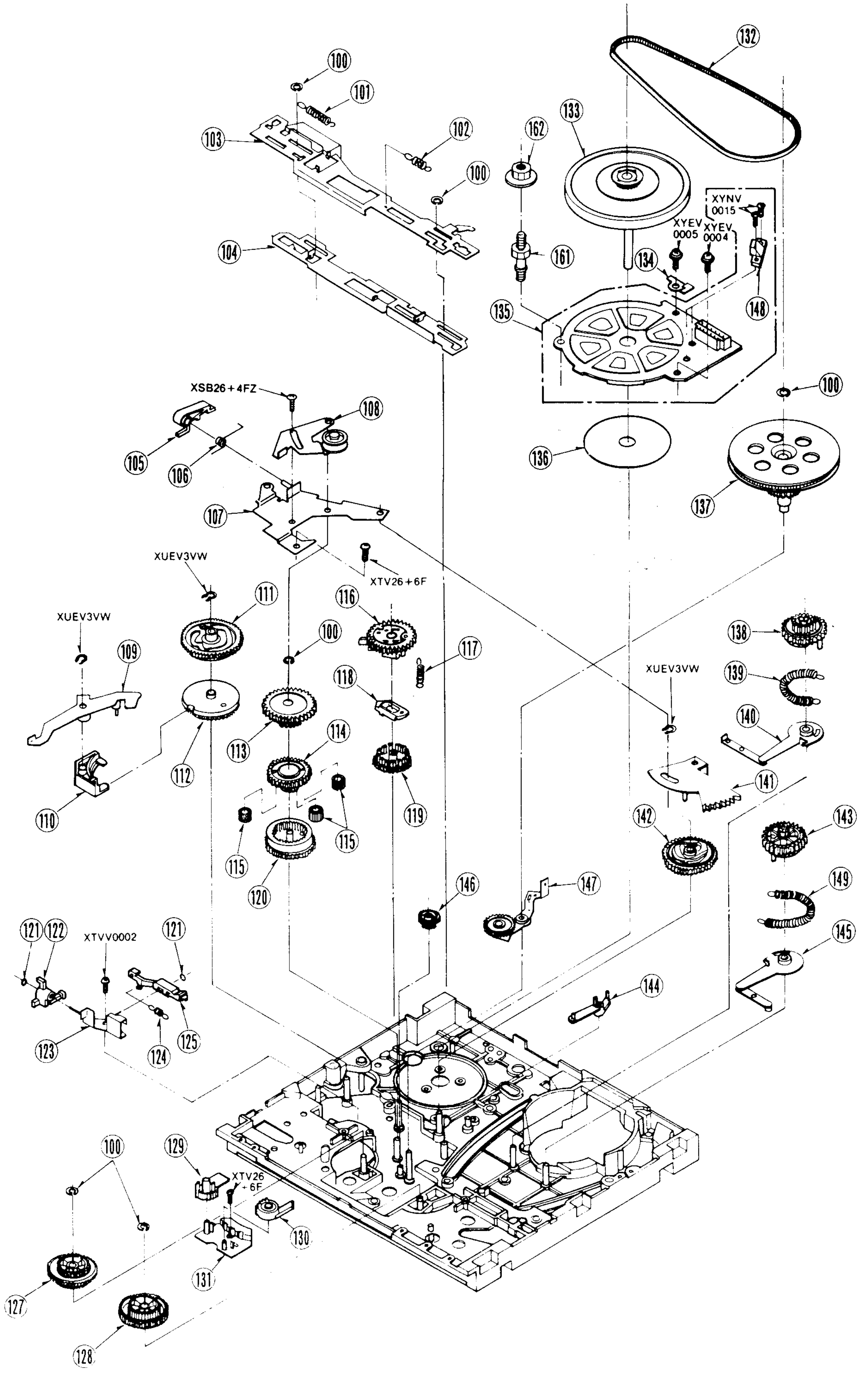
❶ CHASSIS PARTS SECTION (1)



Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
1(1)		VHD0141	HEAD AMP SET SCREW	2	
2(1)		VMA6897	HEAD AMP MOUNT ANGLE (L)	1	
3(1)		VMA8709	HEAD AMP MOUNT ANGLE (R) UNIT	1	
5(1)		VXS0082	EARTH PLATE UNIT	1	
6(1)		VEG0890	CYLINDER UNIT	1	<!>
7(1)		VEH0532	UPPER CYLINDER UNIT	1	<!>
8(1)		VJR0082	RT TERMINAL	1	
10(1)		VHD0425	UPPER CYLINDER SET SCREW	2	
11(1)		VXL1495	TENSION ARM (1) UNIT	1	
12(1)		VMB1563	TENSION SPRING	1	
13(1)		VXZ0267	TENSION BAND UNIT	1	
14(1)		VXR0185	SUPPLY REEL TABLE UNIT	1	
15(1)		VMX1171	REEL WASHER (0.5mm)	2	
16(1)		VXL1496	TENSION RELEASE ARM(A)UNIT	1	
17(1)		VBS0038	FE HEAD	1	
18(1)		VXA2705	TENSION ARM BASE (1) UNIT	1	
19(1)		VMA6895	MOUNT ANGLE (L)	1	
20(1)		VMX1079	CUT WASHER	2	
21(1)		VML2415	TENSION RELEASE ARM(B)UNIT	1	
22(1)		VMB1582	TENSION RELEASE SPRING	1	
23(1)		VES0489	SAFETY SW	1	
24(1)		VXZ0259	SUPPLY MAIN BRAKE UNIT	1	
25(1)		VXZ0274	SUPPLY SOFT BRAKE(1)UNIT	1	
26(1)		VMB1564	SUPPLY SOFT BRAKE SPRING	1	
27(1)		VXZ0262	TAKE UP MAIN BRAKE UNIT	1	
28(1)		VXZ0221	TAKE UP SOFT BRAKE UNIT	1	
29(1)		VMB1561	TAKE UP SOFT BRAKE SPRING	1	
30(1)		VMA6896	MOUNT ANGLE (R)	1	
31(1)		VHD0322	ADJUST SCREW	1	
32(1)		VMB1251	ADJUST SPRING	1	
33(1)		VHD0089B	AZIMUTH ADJUST SCREW	1	
34(1)		VED0160	A/C HEAD (1) UNIT	1	
35(1)		VHN0063	M4 NYLON NUT	1	
36(1)		VHN0110	ADJUST NUT	1	
37(1)		VMA7831	HEAD BASE	1	
38(1)		VMB1567	A/C HEAD SPRING	1	
39(1)		VXL1857	SUB LOADING ARM (1) UNIT	1	
40(1)		VMB1566	SUB POST SPRING	1	
41(1)		VXQ0006	THRUST SCREW UNIT	1	
42(1)		VHD0317	HOUSING SCREW	2	
43(1)		VMX1033	OIL SEAL	2	
44(1)		VMX1353	PINCH CAM CAP	1	
45(1)		VXL1858	PRESSURE ROLLER UNIT	1	
46(1)		VMB1941	PIN PRESSURE SPRING	1	
47(1)		VML2232	PINCH PRESSURE ARM	1	
48(1)		VMB1569	PINCH PRESSURE ARM RELEASE SPRING	1	
49(1)		VML1874	PINCH LIFT ARM	1	
50(1)		VDG0597	P5 PULL OUT SECTOR GEAR	1	
51(1)		VDG0421	PINCH CAM	1	
52(1)		VHD0045	M3 NYLON NUT	1	
53(1)		VXL2027	P5 UNIT	1	
54(1)		VMB2718	P5 SPRING	1	
55(1)		VSS0175	MODE SW	1	
57(1)		VXP0863	ROLLER POST UNIT	2	
58(1)		VXA4106	INCLINED BASE (S)(1)UNIT	1	
59(1)		VHD0133	ROLLER POST SCREW	2	
60(1)		VMD0910	POST STOPPER	2	
62(1)		VXA3876	INCLINED BASE(T)(1)UNIT	1	
63(1)		VXA2687	INCLINED ADJUST PLATE UNIT	1	
64(1)		VDG0483	PINCH SPEED DOWN GEAR	1	
65(1)		VDG0664	CONNECTION GEAR	1	
66(1)		VXA3735	SOLENOID UNIT	1	
67(1)		VXA2692	KICK ROD UNIT	1	
68(1)		VML1849	SOLENOID LEVER	1	
69(1)		VMB1553	KICK ROD SPRING	1	
70(1)		VMB2012	MAIN BRAKE SPRING	1	
71(1)		VXR0188	TAKE UP REEL TABLE UNIT	1	
72(1)		VXD0101	HOUSING UNIT	1	
76(1)		VHD0374	HOUSING SCREW	1	
77(1)		VHD0342	CYLINDER SCREW	3	
80(1)		VXA3520	LED HOLDER UNIT	1	
81(1)		VMA7829	REINFORCEMENT PLATE (F)	1	
82(1)		VMA8468	REINFORCEMENT PLATE (R)	1	
83(1)		VMB1733	LEAF SPRING	1	
84(1)		VMX1088	SUPPLY UPPER LIMITER	1	
85(1)		VDP1072	SUPPLY ROLLER	1	
86(1)		VMX1581	P1 COLLAR	1	
87(1)		VMX1533	SUPPLY ROLLER LIMITER	1	
88(1)		VMX1544	P4 UPPER LIMITER	1	
89(1)		VMX1568	P4 SLEEVE	1	
90(1)		VMX1534	P4 LOWER LIMITER	1	
91(1)		VWJ0506	FLEXIBLE CABLE	1	P4101-P1501(6P)

❷ CHASSIS PARTS SECTION (2)

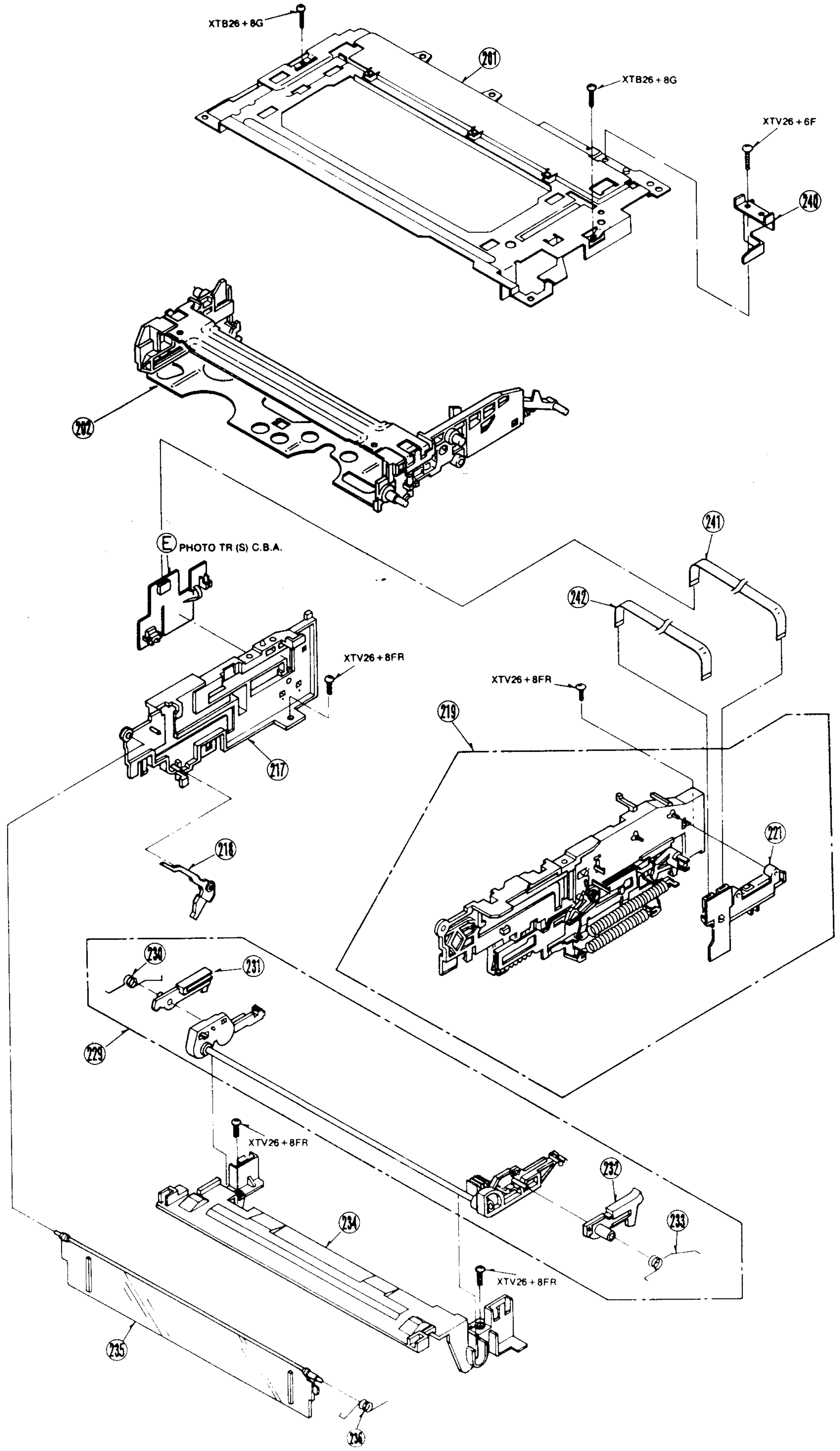


100
101
102
103
100
104
132
133
162
161
XYNV 0015
XYEV 0005
XYEV 0004
134
135
148
100
136
137
XSB26+4FZ
108
105
106
107
XTV26+6F
XUEV3VW
111
116
100
117
118
XUEV3VW
109
112
110
113
114
115
115
120
119
XUEV3VW
138
139
140
141
142
143
149
145
146
147
144
121
122
XTVV0002
121
123
124
125
100
129
XTV26 +6F
130
131
127
128

Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
100(2)		VMX1079	CUT WASHER	6	
101(2)		VMB1583	TAKE UP SOFT BRAKE RELEASE	1	
			ARM SPRING		
102(2)		VMB1560	MAIN LEVER SPRING	1	
103(2)		VXA3509	MAIN LEVER (1) UNIT	1	
104(2)		VMM0215	SUB LEVER	1	
105(2)		VXL2088	SS BRAKE ARM UNIT	1	
106(2)		VMB1588	SS BRAKE SPRING	1	
107(2)		VXA3512	SS BRAKE BASE (1) UNIT	1	
108(2)		VXA3516	TENSION ROLLER UNIT	1	
109(2)		VXL1632	CAM FOLLOWER ARM UNIT	1	
110(2)		VML1861	DETENT ARM	1	
111(2)		VDG0574	MAIN CAM GEAR	1	
112(2)		VDG0343	SUB CAM GEAR	1	
113(2)		VDG0348	CENTRE GEAR	1	
114(2)		VDG0422	RETAINER GEAR	1	
115(2)		VDG0345	PLANET GEAR	3	
116(2)		VDG0547	CLUTCH DISK	1	
117(2)		VMB1558	CLUTCH SPRING	1	
118(2)		VDG0350	LOCK SLIDE GEAR	1	
119(2)		VDG0335	DRIVE DISK	1	
120(2)		VDG0342	RING GEAR	1	
121(2)		VMX0967	CUT WASHER	2	
122(2)		VML1859	CHANGE LEVER	1	
123(2)		VXA2672	RELEASE LEVER (1) UNIT	1	
124(2)		VMB1557	RELEASE SPRING	1	
125(2)		VML1860	RELEASE LEVER	1	
127(2)		VXP1002	TAKE UP REEL GEAR UNIT	1	
128(2)		VXP0981	SUPPLY REEL GEAR UNIT	1	
129(2)		VML1858	RETURN LEVER (R)	1	
130(2)		VML1857	RETURN LEVER (L)	1	
131(2)		VMD0913	STOPPER BASE	1	
132(2)		VDV0169	TIMING BELT	1	
133(2)		VXP1113	ROTOR UNIT	1	
134(2)		VMA7941	ROTOR STOPPER	1	
135(2)		VEK4097	STATOR UNIT	1	<!>
136(2)		VMA6847	SUB PLATE	1	
137(2)		VXP0917	CENTRE PULLEY UNIT	1	
138(2)		VDG0564	LOADING GEAR (T)	1	
139(2)		VMB1555	LOADING SPRING (T)	1	
140(2)		VXL1489	LOADING ARM (T)(1) UNIT	1	
141(2)		VXA3515	SECTOR GEAR UNIT	1	
142(2)		VDG0448	LOADING CAM GEAR	1	
143(2)		VDG0419	LOADING GEAR (S)	1	
144(2)		VML1855	PLAY CONTROL ARM	1	
145(2)		VXL1487	LOADING ARM (S)(1) UNIT	1	
146(2)		VDG0546	INTERMEDIATE GEAR	1	
147(2)		VXL1861	PLAY ARM UNIT	1	
148(2)		VBK0048	FG HEAD	1	
149(2)		VMB1746	LOADING SPRING(S)	1	
161(2)		VHD0431	STATOR SPACER SCREW	1	
162(2)		VHN0102	STATOR NUT	1	

❸ CASSETTE UP MECHANISM SECTION


XTB26+8G
201
XTB26+8G
XTV26+6F
240
202
E PHOTO TR (S) C.B.A.
241
242
XTV26+8FR
XTV26+8FR
219
217
221
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231
229
XTV26+8FR
232
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233
XTV26+8FR
235
236

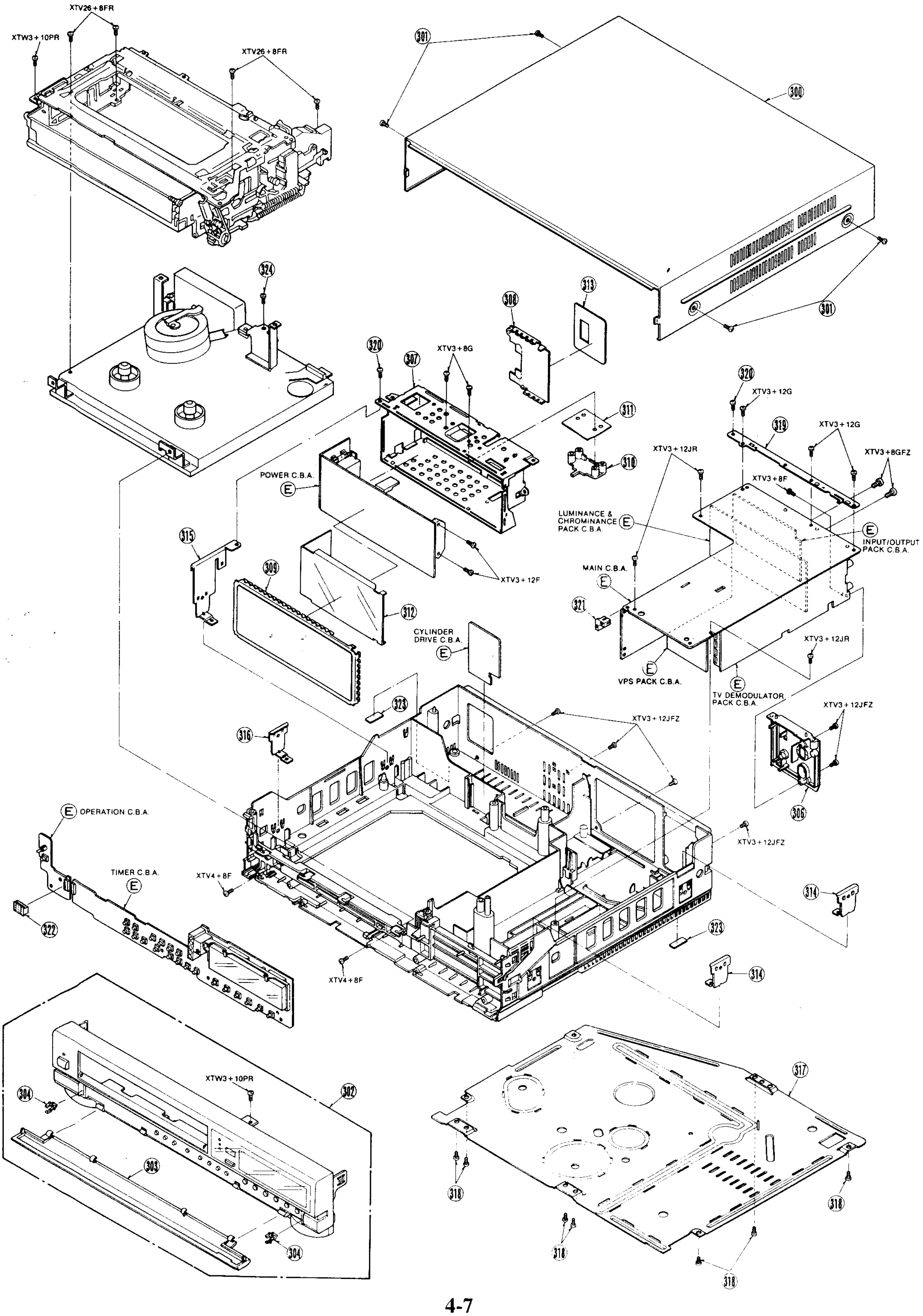
Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
201(3)		VXA4638	TOP PLATE UNIT	1	
202(3)		VXA3840	CASSETTE HOLDER UNIT	1	
217(3)		VMD1890	SIDE PLATE (L)	1	
218(3)		VML1880	OPENER LEVER	1	
219(3)		VXA4468	SIDE PLATE (R) UNIT	1	
221(3)		VXA4469	SLIDE SW UNIT	1	
229(3)		VXP0987	MAIN SHAFT UNIT	1	
230(3)		VMB1836	SUB WIPER SPRING (L)	1	
231(3)		VML1878	SUB WIPER ARM (L)	1	
232(3)		VML1879	SUB WIPER ARM (R)	1	
233(3)		VMB1837	SUB WIPER SPRING (R)	1	
234(3)		VMA6900	CASSETTE GUIDE	1	
235(3)		VKF1741	BLINDER PANEL	1	
236(3)		VMB1258	BLINDER SPRING	1	
240(3)		VMA7224	CASSETTE HOLDER ANGLE	1	
241(3)		VWJ040W270MM	FLEXIBLE CARD (CABLE)	1	P1503-P1507(4P)
242(3)		VWJ0534B	FLEXIBLE CARD (CABLE)	1	P6002-P1508(6P)

Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
300(4)		VGM0922	TOP PANEL	1	
301(4)		VHD0304	TOP PANEL SCREW	4	
302(4)		VYP4102	FRONT PANEL UNIT	1	
303(4)		VYF1866	FRONT DOOR UNIT	1	
304(4)		VGQ0550	DOOR LOCK PIECE	2	
306(4)		VJH0668	ANT TERMINAL PLATE	1	
307(4)		VXA4453	POWER SHIELD COVER(MAIN)	1	
			UNIT		
308(4)		VSC2351	POWER SHIELD COVER (TOP)	1	
309(4)		VSC3375	POWER SHIELD COVER (BOTTOM)	1	
310(4)		VGQ1377	IC HOLDER	1	
311(4)		VMZ1224	INSULATION SHEET	1	
312(4)		VMZ1854	POWER BARRIER	1	
313(4)		VGH2721	NAME PLATE	1	
314(4)		VMP1037	TOP HOLDER ANGLE (R)	2	
315(4)		VMP1995	TOP HOLDER ANGLE (REAR-L)	1	
316(4)		VMP3302	TOP HOLDER ANGLE (FRONT-L)	1	
317(4)		VKU0309	BOTTOM PLATE	1	
318(4)		VHD0059	BOTTOM PLATE SCREW	7	
319(4)		VMP3141	EARTH ANGLE	1	
320(4)		VHD0141	POWER SCREW	1	
321(4)		VJF0374	MAIN C.B.A. HOLDER	1	
322(4)		VJS3084A005	BRIDGE CONNECTOR	1	
323(4)		VKA0122	FOOT	2	
324(4)		VHD0168	CHASSIS SCREW	1	

❹ CASING PARTS SECTION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XTW3+10PR
XTV26+8FR
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307
XTV3+8G
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320
XTV3+12G
319
XTV3+12G
XTV3+12JR
XTV3+8GFZ
XTV3+8F
POWER C.B.A.
E
LUMINANCE & CHROMINANCE PACK C.B.A.
E
E
INPUT/OUTPUT PACK C.B.A.
315
XTV3+12F
MAIN C.B.A.
E
309
312
321
CYLINDER DRIVE C.B.A.
E
XTV3+12JR
E
VPS PACK C.B.A.
E
TV DEMODULATOR PACK C.B.A.
323
XTV3+12JFZ
XTV3+12JFZ
316
306
XTV3+12JFZ
E
OPERATION C.B.A.
TIMER C.B.A.
E
XTV4+8F
314
322
323
314
XTV4+8F
317
XTW3+10PR
304
302
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318
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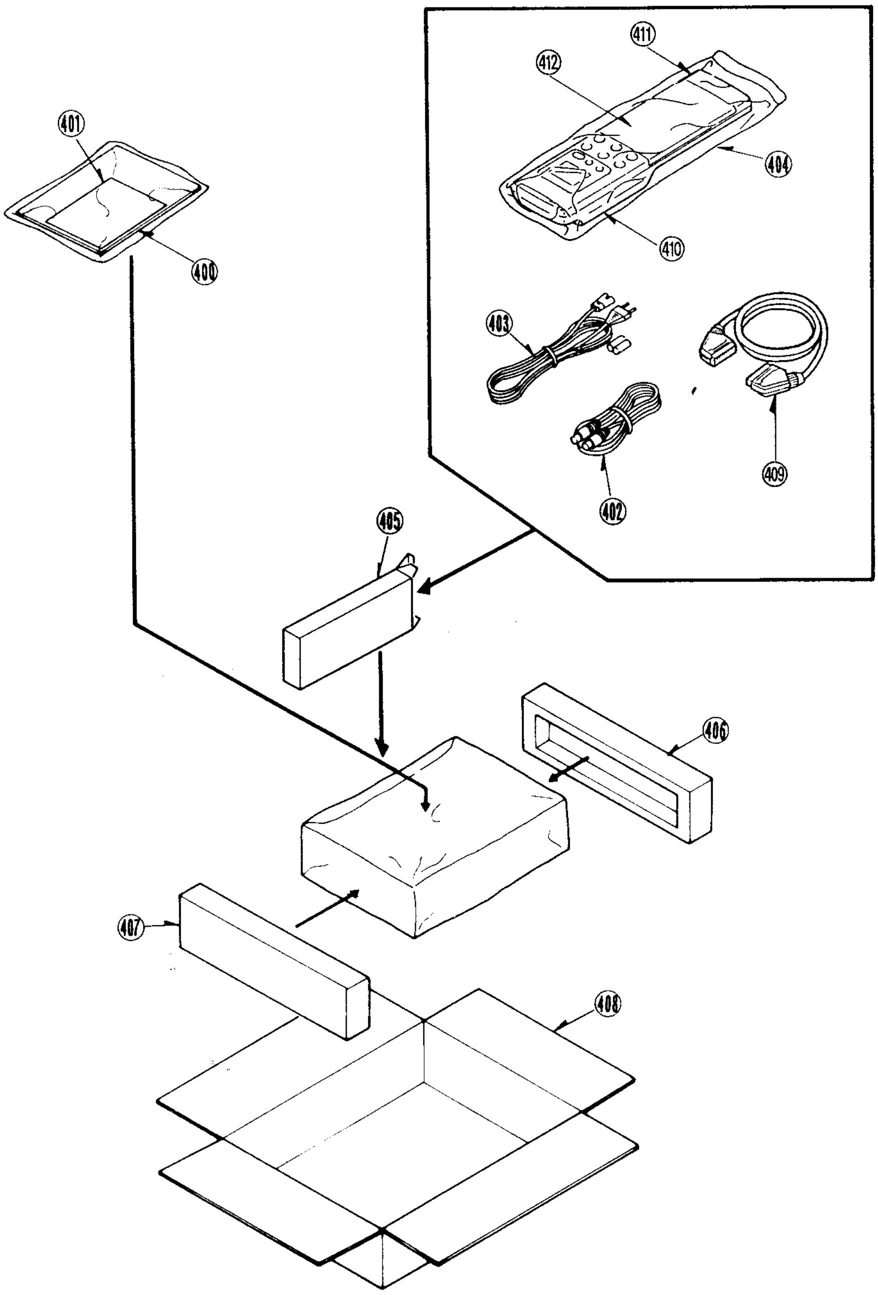
318

❺ PACKING PARTS SECTION



Note: 1. * Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
400(5)		VQT4697	OPERATING INSTRUCTION	1	<!>
401(5)		VQC1859	PROGRAMME SHEET	1	
402(5)		VJA0710	DIN RF CABLE	1	
403(5)		VJA0664	AC CORD	1	<!>
404(5)		VEQ1423	REMOTE CONTROLLER	1	
			(BUILD IN DIGITAL SCANNER)		
405(5)		VPK0825	ACCESSORY PACKING	1	
406(5)		VPN3103	CUSHION (R)	1	
407(5)		VPN3104	CUSHION (L)	1	
408(5)		VPG6462	PACKING	1	
409(5)		VJA0718	21 PIN CABLE	1	
410(5)		VKF1658	BATTERY COVER	1	
411(5)		VGQ2399	SENSOR CAP	1	
412(5)		VGP2797	DOOR PANEL	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			SERVICING FIXTURES		
		VFJ8125H3F	VHS-ALIGNMENT TAPE (PAL)	1	
		VFK0335	RETAINING RING REMOVER	1	
			(3mm/4mm)		
		VFK0387	TENSION POST ADJUSTMENT	1	
			PLATE		
		VFK0191	POST ADJUSTMENT PLATE	1	
		VFK0190	REEL TABLE HEIGHT GAUGE	1	
		VFK0328	H-POSITION ADJ.	1	
			SCREWDRIVER		
		VFK0329	POST ADJUSTMENT SCREWDRIVER	1	
		VFK62	FAN TYPE TENSION GAUGE	1	
		VFK0326	HEX WRENCH SET	1	
		VFK0132	BACK TENSION METER	1	
		VFK0343	CHECK LIGHT	1	
		VFK0344	HEIGHT ADJUSTMENT JIG	1	
		VFK27	HEAD CLEANING STICK	1	
		MOR265	MORLYTONE GREASE	1	
		VFK0680	WHITE GREASE	1	
		VFK0341	UPPER CYLINDER REMOVER	1	

4-2. ELECTRICAL REPLACEMENT PARTS LIST

Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.
3.Unless otherwise specified,
All resistors are in OHMS ,K-1,000 OHMS. All capacitors are in MICRO-FARADS(uf),P=uuF.
4.The P.C.Board units marked width'■'show below the main assembled parts.
5.Printed circuit board assembly with mark(NLA) is no longer available after discontinuation of the product.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VEP03956A	MAIN C.B.A.	1	(NLA)
		VEP03883G	INPUT/OUTPUT PACK C.B.A.	1	(NLA)
		VEP03928D	LUMINANCE & CHROMINANCE PACK C.B.A.	1	(NLA)
		VEP02375B	CYLINDER DRIVE C.B.A.	1	(NLA)
		VEP05167E	HEAD AMP C.B.A.	1	(NLA)
		VEP07538G	VPS C.B.A.	1	(NLA)
		VEP07687A	TIMER C.B.A.	1	(NLA)
		VEP00S58A	OPERATION C.B.A.	1	(NLA)
		VEP07645M	TV DEMODULATOR C.B.A.	1	(NLA)<!>
		VEP01518D	POWER C.B.A.	1	(NLA)
		VEP00R11A	PHOTO Tr. (S) C.B.A.	1	(NLA)
		VEP00R12B	PHOTO Tr. (T) C.B.A.	1	(NLA)
		VXA4462	MECHANISM CONNECTION C.B.A.	1	(NLA)
		ENV57895H3	TUNER	1	<!>
F1101		XBA2C16TB0	FUSE	1	<!>
	■	VEP03956A	MAIN C.B.A.		(NLA)
			CAPACITORS		
C1001		ECEA1EK470	E.CAPACITOR 25V 47U	1	
C1002		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C1003		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C2001		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C2002		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C2003		ECEA1HKN3R3	E.CAPACITOR 50V 3.3U	1	
C2004		ECQB1H223KZ	P.CAPACITOR 50V 0.022U	1	
C2005		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2006		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C2007		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C2008		ECQB1H223KZ	P.CAPACITOR 50V 0.022U	1	
C2009		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C2010		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2011		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C2012		ECQB1H223KZ	P.CAPACITOR 50V 0.022U	1	
C2013		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2017		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2018		ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C2019		ECUM1H471KBN	C.CAPACITOR CH 50V 470P	1	
C2020		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2021		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2022,23		ECEA0JK220	E.CAPACITOR 6.3V 22U	2	
C2024		ECQV1H184JZ	P.CAPACITOR 50V 0.18U	1	
C2025		ECQB1H103JZ	P.CAPACITOR 50V 0.01U	1	
C2028		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C2031		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C2033		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C2034,35		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	2	
C2036		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C2038		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2101		ECUM1H104ZFN	C.CAPACITOR 50V	1	
C2211-13		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	3	
C2214		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C2215-19		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	5	
C2221		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C2222		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C2301		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C2302		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C2323		ECEA1HKNR47	E.CAPACITOR 50V 0.47U	1	
C3001		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3002		ECA0JM471	E.CAPACITOR 6.3V 470U	1	
C3004-06		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C3008		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C3009		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3010		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C3203		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C3204		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C3205		ECUM1H681JCN	C.CAPACITOR CH 50V 680P	1	
C3206		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3207		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C3211		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3212		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C3213		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3214		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C4001		ECQB1H153JH	P.CAPACITOR 50V 0.015U	1	
C4002		ECEA16M33	E.CAPACITOR 16V 33U	1	
C4003		ECQB1H102KZ	P.CAPACITOR 50V 1000P	1	
C4004		ECQP1332JZ	P.CAPACITOR 100V 3300P	1	
C4005		ECCD2H181J	C.CAPACITOR 500V 180P	1	
C4006		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4007		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C4008		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4009		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C4012		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4013		ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C4014		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4015		ECEA16M10R	E.CAPACITOR 16V 10U	1	
C4016		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4017		ECEA10M22	E.CAPACITOR 10V 22U	1	
C4018		ECQB1H822KZ	P.CAPACITOR 50V 8200P	1	
C4019		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4020		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4021		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C4022		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4023		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4024,25		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C4026		ECUM1H104ZFN	C.CAPACITOR 50V	1	
C4029		ECQB1H123JH	P.CAPACITOR 50V 0.012U	1	
C4036		ECUM1H681JCN	C.CAPACITOR CH 50V 680P	1	
C4038		ECQB1H273JH	P.CAPACITOR 50V 0.027U	1	
C6001		ECUM1H104ZFN	C.CAPACITOR 50V	1	
C6002		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C6005		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C6006,07		ECUM1H271KBN	C.CAPACITOR CH 50V 270P	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C6008		ECQV1H224JZ	P.CAPACITOR 50V 0.22U	1	
C6102		ECUM1H104ZFN	C.CAPACITOR 50V	1	
C6103		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6201		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C6501,02		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	2	
C6504		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6601		ECEA0JU331	E.CAPACITOR 6.3V 330U	1	
C6602		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C6603		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6604		ECUM1H104ZFN	C.CAPACITOR 50V	1	
C6605		ECEA1EU470	E.CAPACITOR 25V 47U	1	
C6606,07		ECA1CM102	E.CAPACITOR	2	
C7401		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C7402		EECS5R5T473	E.CAPACITOR	1	
C7403		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7404		ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C7406		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7408		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7409		ECUM1H104ZFN	C.CAPACITOR 50V	1	
C7410,11		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7421		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7422		ECUM1H272KBN	C.CAPACITOR 50V 2700P	1	
C7425		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7427,28		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7441		ECUM1H104ZFM	C.CAPACITOR CH 50V 0.1U	1	
			DIODES		
D1001,02		1SS254	DIODE	2	
D2001		1SS254	DIODE	1	
D2099		MA723VT	DIODE	1	(VT)
D2303,04		1SS254	DIODE	2	
D3001		1SS254	DIODE	1	
D4003,04		1SS254	DIODE	2	
D6005		1SS254	DIODE	1	
D6007		1SS254	DIODE	1	
D6601-06		1SS254	DIODE	6	
D6607		11ES1	DIODE	1	
D6608		ERA15-01	DIODE	1	
D6610		1SS254	DIODE	1	
D7401		MA723VT	DIODE	1	(VT)
			INTEGRATED CIRCUITS		
IC2201		XRA6435S	IC	1	
IC2301		UPC358G2	IC	1	
IC4001		XRA7766AS	IC	1	
IC6001		MN6743VRDD	IC	1	
IC6002		UPC358G2	IC	1	
IC6101		PST591B	IC	1	
IC6601		SI-3090CA	IC	1	
			COILS		
L2001		ELESP102KA	COIL 1000UH	1	
L2002		ELESQ101KA	COIL 100UH	1	
L2004		VLP0125	COIL	1	
L2005		ELESQ101KA	COIL 100UH	1	
L3001		ELESQ101KA	COIL 100UH	1	
L3202		ELESP6R8KA	COIL 6.7UH	1	
L3203		ELESQ101KA	COIL 100UH	1	
L3204		ELESP120KA	COIL 12UH	1	
L3205		ELESP5R6KA	COIL 5.6UH	1	
L3206		ELESQ101KA	COIL 100UH	1	
L3207		ELESP3R3KA	COIL 3.3UH	1	
L4001		VLQEL07F153K	COIL	1	
L4002		ELESP471KA	COIL 470UH	1	
L6001		VLP0074	COIL	1	
L7401		ELESP1R0KA	COIL 1UH	1	
L7402		ELESQ101KA	COIL 100UH	1	
			CONNECTORS		
P1001		VJS3193A013A	CONNECTOR (FEMALE)	1	
P2001		VJS2328	CONNECTOR (FEMALE)	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
P2002		VJS3193A015A	CONNECTOR (FEMALE)	1	
P3001		VJS1658	CONNECTOR (FEMALE)	1	
P4101		VJS2331	CONNECTOR (FEMALE)	1	
P6001		VJS3193A013A	CONNECTOR (FEMALE)	1	
P6002		VJS3147	CONNECTOR (FEMALE)	1	
P7401		VJS3193A016A	CONNECTOR (FEMALE)	1	
P7402		VJS3193A014A	CONNECTOR (FEMALE)	1	
PP3001		VJP3044G009W	CONNECTOR (MALE)	1	
PP3002		VJP3044G012W	CONNECTOR (MALE)	1	
PP3003		VJP3044G006W	CONNECTOR (MALE)	1	
PP3901		VJP3042G006W	CONNECTOR (MALE)	1	
PP3902		VJP3042A011W	CONNECTOR (MALE)	1	
PP7401		VJP3043A005W	CONNECTOR (MALE)	1	
PP7402		VJP3043A004W	CONNECTOR (MALE)	1	
PP7403		VJP3043A005W	CONNECTOR (MALE)	1	
PP7404		VJP3043A004W	CONNECTOR (MALE)	1	
PP7406		VJP3043G010W	CONNECTOR (MALE)	1	
			TRANSISTORS		
Q3001		MSB709	TRANSISTOR	1	
Q3201		MSC2295	TRANSISTOR	1	
Q3203		MSD601	TRANSISTOR	1	
Q3204		2SB970-R	TRANSISTOR CHIP	1	(R,S)
Q4001		MSD602-R	TRANSISTOR	1	
Q6202		MSB710-R	TRANSISTOR	1	
Q6203		2SB1321-R	TRANSISTOR	1	
Q6603-05		2SD1994-S	TRANSISTOR	3	(S)
Q6606		MSD602	TRANSISTOR	1	
Q6607		MSD601	TRANSISTOR	1	
			COMBINATION PARTS		
QR1001		MRN1402	TRANSISTOR	1	
QR2001		MRN1404	TRANSISTOR	1	
QR2006		MRN1404	TRANSISTOR	1	
QR3001		MRN2402	TRANSISTOR	1	
QR3007		MRN1403	TRANSISTOR	1	
QR4001		MRN1404	TRANSISTOR	1	
QR4102		MRN1404	TRANSISTOR	1	
QR4103		MRN1402	TRANSISTOR	1	
QR6202		MRN1404	TRANSISTOR	1	
QR6601		UN211H	IC	1	
QR6602		MRN2404	TRANSISTOR	1	
QR6603-05		MRN1403	TRANSISTOR	3	
QR6606		MRN2404	TRANSISTOR	1	
QR6607		UN2119	TRANSISTOR-RESISTOR	1	
QR7401		MRN1402	TRANSISTOR	1	
			RESISTORS		
R2003		ERJ6GMYG392	M.RESISTOR CH 1/10W 3.9K	1	
R2004		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2005		ERJ6GMYJ123	M.RESISTOR CH 1/10W 12K	1	
R2006-08		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	3	
R2009,10		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R2011		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R2012,13		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	2	
R2024		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2026		ERJ6GMYG513	M.RESISTOR CH 1/10W 51K	1	
R2027		ERJ6GMYJ824	M.RESISTOR CH 1/10W 820K	1	
R2030		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R2032		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2033		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2034		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R2102		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R2103,04		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R2108		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2215		ERJ6GMYG512	M.RESISTOR CH 1/10W 5.1K	1	
R2217		ERJ6GMYG622	M.RESISTOR CH 1/10W 6.2K	1	
R2218		ERJ6GMYG752	M.RESISTOR CH 1/10W 7.5K	1	
R2219		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2220-22		ERDS2TJ330	C.RESISTOR 1/4W 33	3	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R2223		ERJ6GMYJ330	M.RESISTOR CH 1/10W 33	1	
R2224		ERX12SJR47	M.RESISTOR 1/2W 0.47	1	
R2301		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R2302		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R2303		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2307		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2312		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R3002		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3003		ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	1	
R3004		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3012		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R3013		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3014		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R3015		ERJ6GMZOROO	M.RESISTOR CH 1/10W 0	1	
R3201,02		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R3203		ERJ6GMZOROO	M.RESISTOR CH 1/10W 0	1	
R3204,05		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	2	
R3213		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3215		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R3216		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3217		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3223		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R3224		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4002		ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R4003		ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	1	
R4004		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4006		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4007		ERJ6GMYG221	M.RESISTOR CH 1/10W 220	1	
R4008		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R4010		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R4011		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R4012		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4013		ERJ6GMYJ394	M.RESISTOR CH 1/10W 390K	1	
R4014		ERJ6GMYG822	M.RESISTOR CH 1/10W 8.2K	1	
R4015		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4016		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R4017		ERJ6GMYG302	M.RESISTOR CH 1/10W 3K	1	
R4018		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4019		ERJ6GMYG513	M.RESISTOR CH 1/10W 51K	1	
R4020		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4023		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R4024,25		ERJ6GMYG104	M.RESISTOR CH 1/10W 100K	2	
R4026		ERJ6GMYJ123	M.RESISTOR CH 1/10W 12K	1	
R4027		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4038		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4042		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R4044		ERJ6GMZOROO	M.RESISTOR CH 1/10W 0	1	
R4049		ERJ6GMYJ470	M.RESISTOR CH 1/10W 47	1	
R4053		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4101		ERJ6GMYJ100	M.RESISTOR CH 1/10W 10	1	
R4102		ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R4103		ERJ6GMYG622	M.RESISTOR CH 1/10W 6.2K	1	
R4104		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R4106		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R4109		ERJ6GMZOROO	M.RESISTOR CH 1/10W 0	1	
R6001		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6003,04		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	2	
R6005		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R6006,07		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R6008-11		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	4	
R6012-15		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	4	
R6016,17		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	2	
R6018		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R6019		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R6022		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6023		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R6024,25		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	2	
R6026,27		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	2	
R6032		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R6036		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R6037		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R6038		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R6039		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R6052		ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R6053		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R6054		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R6056		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R6057		ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	1	
R6061		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R6062		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R6063		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R6064		ERJ6GMYJ184	M.RESISTOR CH 1/10W 180K	1	
R6065		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R6066		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6102		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6201		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R6204		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R6205		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6501		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6601		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R6602		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6605		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R6606		ERJ6GMYJ131	M.RESISTOR CH 1/10W 130	1	
R6607		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R6608		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R6609		ERG3SJ220	M.RESISTOR 3W 22	1	
R6610		ERJ6GMYJ201	M.RESISTOR CH 1/10W 200	1	
R6611		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6612		ERD2FCVG220	C.RESISTOR 2W 22	1	<!>
R6613		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6614		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R6616		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6617		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R6618		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6623		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R7401		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R7402		ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1	
			TRANSFORMERS		
T4001		EIQ7QF014Q	TRANSFORMER	1	
			VARIABLE RESISTORS		
VR2001		EVNDXAA00B54	V.RESISTOR 50K	1	
VR3012		EVNDXAA00B52	V.RESISTOR 500	1	
VR4002		EVNDXAA00B25	V.RESISTOR 200K	1	
			CRYSTAL OSCILLATORS		
X6501		VSX0479	CRYSTAL OSCILLATOR	1	
X7401		VSQ0565	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VWJ0532B	FLAT CARD (CABLE)	1	(P3001-P501)
		VWJ160W170BB	FLAT CARD (CABLE)	1	(P7401-P7501)
		VWJ140W170BB	FLAT CARD (CABLE)	1	(P7402-P7502)
		VJF0974	FLAT CADE CLIP	1	
		VWJ0528B	FLAT CARD (CABLE)	1	(P1001-P1101)
		VWJ0530B	FLAT CARD (CABLE)	1	(P2002-P006)
		VWJ0533A	FLAT CARD (CABLE)	1	(P6001-P1504)
		VWJ05AW410MM	FLAT CARD (CABLE)	1	(P2001-P201)
	■	VEP03883G	INPUT/OUTPUT PACK C.B.A.		(NLA)
			CAPACITORS		
C3901,02		ECEA1CK330	E.CAPACITOR 16V 33U	2	
C3903		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C3904-06		ECEA1CK470	E.CAPACITOR 16V 47U	3	
C3907,08		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	2	
C3909		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C3910		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3911		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C3912		ECUM1H471KBN	C.CAPACITOR CH 50V 470P	1	
C3922		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
			DIODES		
D3901,02		1SS254	DIODE	2	
			INTEGRATED CIRCUITS		
IC3901		LA7150	IC	1	
			CONNECTORS		
JK3906		VJS1469	CONNECTOR (FEMALE)	1	
			COILS		
L3901		ELESQ2R7KA	COIL 2.7UH	1	
L3902,03		ELESP1R0KA	COIL 1UH	2	
L3904		ELESP471KA	COIL 470UH	1	
			CONNECTORS		
PS3901		VJS3042F006W	CONNECTOR (FEMALE)	1	
PS3902		VJS3042B011W	CONNECTOR (FEMALE)	1	
			RESISTORS		
R3901		ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	1	
R3902		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R3903,04		ERJ6GMYJ242	M.RESISTOR CH 1/10W 2.4K	2	
R3905		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R3906		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R3907,08		ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	2	
R3909		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3910		ERJ6GMYJ622	M.RESISTOR CH 1/10W 6.2K	1	
			MISCELLANEOUS		
		VEJ1259	REAR JACK PLATE	1	
	■	VEP03928D	LUMINANCE & CHROMINANCE		(NLA)
			PACK C.B.A.		
			CAPACITORS		
C301		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C302		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C303		ECUM1H104ZFN	C.CAPACITOR 50V	1	
C304,05		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	2	
C306		ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
C307		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C308		ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1	
C309		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C310		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C314		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C315		ECUM1H104ZFN	C.CAPACITOR 50V	1	
C316		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C317		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C318		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C319		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C320,21		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C322		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C323		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C325		ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	1	
C391-93		ECUM1H104ZFN	C.CAPACITOR 50V	3	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C394		ECUM1H104ZFN	C.CAPACITOR 50V	1	
C395		ECUM1H104ZFN	C.CAPACITOR 50V	1	
C801,02		ECEA0JK101	E.CAPACITOR 6.3V 100U	2	
C803		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C804		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C805		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C830		ECUM1H104ZFN	C.CAPACITOR 50V	1	
C831		ECUM1H681JCN	CAPACITOR 50V	1	
C832		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C834,35		ECUM1H121JCN	C.CAPACITOR CH 50V 120P	2	
C836,37		ECUM1H104ZFN	C.CAPACITOR 50V	2	
C838		ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C839		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C840		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C841		ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C842		ECUM1H123KBN	C.CAPACITOR 50V 0.012U	1	
			DIODES		
D801,02		1SS254	DIODE	2	
			DELAYS		
DL802		EFDBR124A53T	DELAY	1	
			INTEGRATED CIRCUITS		
IC301		MSM7403MS	IC	1	
IC302		VEFH14D	IC	1	
			COILS		
L301		VLQ0188K101	COIL 100UH	1	
L302,03		VLQ0188J390	COIL 39UH	2	
L304,05		ELESQ101KA	COIL 100UH	2	
L306		ELESP560KA	COIL 56UH	1	
L307,08		VLP0099	COIL	1	
L801		ELESQ101KA	COIL 100UH	1	
L802		ELESP270KA	COIL 27UH	1	
L803		ELESP560JA	COIL 56UH	1	
L804		ELESQ101KA	COIL 100UH	1	
L807		VLQ0188J150	COIL 15UH	1	
L810		VLQ0188J181	COIL 180UH	1	
L812,13		ELESQ101KA	COIL 100UH	2	
			CONNECTORS		
PS301		VJS3044F009W	CONNECTOR (FEMALE)	1	
PS302		VJS3044F012W	CONNECTOR (FEMALE)	1	
PS303		VJS3044F006W	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q301		MSC2295	TRANSISTOR	1	
Q302		MSB709	TRANSISTOR	1	
Q801		MSD601	TRANSISTOR	1	
Q804		MSD601	TRANSISTOR	1	
			COMBINATION PARTS		
QR803		MRN1404	TRANSISTOR	1	
QR807		MRN1403	TRANSISTOR	1	
			RESISTORS		
R301		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R302		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R303,04		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	2	
R308		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R310		ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R311		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R315		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R316,17		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R319		ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R320		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R321		ERJ6GMYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R324		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R326		ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R801		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R802		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R803		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R804		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R805		ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R811		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R812		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R820		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R821		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R832,33		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R834		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R835,36		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R837		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R838		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R840		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R849		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R850		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
			VARIABLE RESISTORS		
VR301		EVMF6SA00B13	V.RESISTOR	1	
			CRYSTAL OSCILLATORS		
X801		VSX0162	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VSC3440	SHIELD BARRIER	1	
		VMZ1913	PCB BARRIER	1	
	■	VEP02375B	CYLINDER DRIVE C.B.A.		(NLA)
			CAPACITORS		
C201		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C203		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C204-06		ECEA1HKOR1	E.CAPACITOR 50V 0.1U	3	
C207		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C208-10		ECEA1VKN4R7	E.CAPACITOR 35V 4.7U	3	
C211		ECQV1H473JZ	P.CAPACITOR 50V 0.047U	1	
C212		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C213		ECEA1CK100	E.CAPACITOR 16V 10U	1	
			INTEGRATED CIRCUITS		
IC201		NA3814K	IC	1	
			COILS		
L201		ELESE101KA	COIL 100UH	1	
L202		VLP0125	COIL	1	
			CONNECTORS		
P201		VJS2330	CONNECTOR (FEMALE)	1	
P202		VJP1250T	CONNECTOR (MALE) 10P	1	
			RESISTORS		
R201		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R202-04		ERDS2TJ150	C.RESISTOR 1/4W 15	3	
R205		ERDS2TJ1R2	C.RESISTOR 1/4W 1.2	1	
R206		ERDS2TJ1R5	C.RESISTOR 1/4W 1.5	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEP05167E	HEAD AMP C.B.A.		(NLA)
			CAPACITORS		
C503		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C505		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C508		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C509		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C510		ECUM1H104ZFN	C.CAPACITOR 50V	1	
C511		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C512		ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
C513		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C514		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C516,17		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C518		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C519		ECUM1H104ZFN	C.CAPACITOR 50V	1	
C520		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C521		ECUM1H104ZFN	C.CAPACITOR 50V	1	
C522		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C523		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C528		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C529		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C530		ECUM1H104ZFN	C.CAPACITOR 50V	1	
C533		ECUM1H104ZFN	C.CAPACITOR 50V	1	
C534		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C536		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
C537		ECUM1H104ZFN	C.CAPACITOR 50V	1	
C540		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C541		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C542,43		ECUM1H104ZFN	C.CAPACITOR 50V	2	
			INTEGRATED CIRCUITS		
IC501		BA7274S	IC	1	
			COILS		
L501		ELESP820KA	COIL 82UH	1	
L506		ELESP151KA	COIL 150UH	1	
L508		ELESQ101KA	COIL 100UH	1	
L509		ELESP270KA	COIL 27UH	1	
L510		ELESQ101KA	COIL 100UH	1	
			CONNECTORS		
P501		VJS1680	CONNECTOR (FEMALE)	1	
PS002		VJS3069T	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q502		MSB709-R	TRANSISTOR	1	(Q,R,S)
Q503		MSC2295	TRANSISTOR	1	
			RESISTORS		
R505		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R507		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R509		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R510		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R512		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R513		ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R514,15		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	2	
R516		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R519		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R520,21		ERJ6GMYJ330	M.RESISTOR CH 1/10W 33	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R523		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R525		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R526		ERJ6GMYJ100	M.RESISTOR CH 1/10W 10	1	
R529		ERJ6GMYJ100	M.RESISTOR CH 1/10W 10	1	
R530		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R532		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R533		ERJ6GMYJ100	M.RESISTOR CH 1/10W 10	1	
R534		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R536		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R537		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R598		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
			VARIABLE RESISTORS		
VR501		EVND6AA00B23	V.RESISTOR 2K	1	
VR502		EVND6AA00B13	V.RESISTOR 1K	1	
			MISCELLANEOUS		
		VSC2355	SHIELD COVER (BOTTOM)	1	
		VSC3303	SHIELD COVER (TOP)	1	
		VSC3304	SHIELD COVER (MAIN)	1	
	■	VEP07538G	VPS C.B.A.		(NLA)
			CAPACITORS		
C7801		ECQB1H102JH	P.CAPACITOR 50V 1000P	1	
C7802		ECQB1H471JZ	F.CAPACITOR 50V 470P	1	
C7803		ECQB1H472JH	P.CAPACITOR 50V 4700P	1	
C7804		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7805		ECQB1H472JH	P.CAPACITOR 50V 4700P	1	
C7806		ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C7815		VCYE1C104MR1	S.CAPACITOR 16V 0.1U	1	
C7816		ECEA0JKA331	E.CAPACITOR 6.3V 330U	1	
C7851		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7852		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C7853,54		ECCF1H330JC	C.CAPACITOR 50V 33P	2	
C7855,56		ECEA1HK010	E.CAPACITOR 50V 1U	2	
			DIODES		
D7851		1SS254	DIODE	1	
			INTEGRATED CIRCUITS		
IC7801		SAA4700	IC	1	
IC7851		MN158413VSSY	IC	1	
			CONNECTORS		
PS1		VJS3043B010W	CONNECTOR (FEMALE)	1	
			COMBINATION PARTS		
QR7851		UN6211	TRANSISTOR-RESISTOR	1	
QR7852		UN6213	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R7801		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R7802		EROS2CKG7502	C.RESISTOR 1/4W 4.7K	1	
R7803,04		ERDS2TJ103	C.RESISTOR 1/4W 10K	2	
R7805		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R7806		EROS2CKG8201	M.RESISTOR 1/4W 8.2K	1	
R7851		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R7852		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CRYSTAL OSCILLATORS		
X7851		EF0A4R0M03C2	CRYSTAL OSCILLATOR	1	
	■	VEP07687A	TIMER C.B.A.		(NLA)
			CAPACITORS		
C7501		ECRHA030E41	TRIMMER 3P	1	
C7502		ECUM1H060DCN	C.CAPACITOR CH 50V 6P	1	
C7503		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C7504		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C7506		ECUM1H104ZFN	C.CAPACITOR 50V	1	
C7507		ECEA1HKSR22	E.CAPACITOR 50V 0.22U	1	
C7510		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C7511		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C7512		ECUM1H104ZFN	C.CAPACITOR 50V	1	
C7513		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C7520-24		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	5	
C7525		ECUM1H821KBN	C.CAPACITOR CH 50V 820P	1	
C7526		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
			DIODES		
D7501		MA4220-H	DIODE	1	
D7502		MA221	DIODE	1	
D7508		MA221	DIODE	1	
D7518		MA221	DIODE	1	
D7521,22		MA221	DIODE	2	
D7528		MA221	DIODE	1	
D7539,40		MA221	DIODE	2	
D7544-47		MA221	DIODE	4	
D7555		LN38GCPLV	DIODE	1	
D7568		MA221	DIODE	1	
			DISPLAY TUBES		
DP7501		VSL0239	DISPLAY TUBE	1	
			INTEGRATED CIRCUITS		
IC7501		MN187164VSTX	IC	1	
IC7502		M6M80021P	IC	1	
IC7503		MN1280L	IC	1	
IC7504		MN1280S	IC	1	(S)
IC7505		M66006FP	IC	1	
			COILS		
L7501		ELESE151K	COIL 150UH	1	
			CONNECTORS		
P7501		VJS3193B016A	CONNECTOR (FEMALE)	1	
P7502		VJS3193B014A	CONNECTOR (FEMALE)	1	
PP7503		VJP3084A005	CONNECTOR (MALE)	1	
			COMBINATION PARTS		
QR7501		MRN1404	TRANSISTOR	1	
QR7502		MRN2404	TRANSISTOR	1	
QR7503		UN2216	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R6701		ERJ6ENF1363	M.RESISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R7501		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R7502		ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R7503		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7504		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R7505		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R7508-10		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	3	
R7511,12		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R7515		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7518,19		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R7520		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R7523-26		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	4	
R7528		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7534		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7564		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R7570		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7572		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R7573		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7575-78		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	4	
R7580		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R7581		ERJ6GMYK2R2	M.RESISTOR CH 1/10W 2.2	1	
R7582		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7586		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7587,88		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R7589		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R7598		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
			SWITCHES		
SW7504-08		EVQ11407K	SWITCH	5	
SW7511		EVQ11407K	SWITCH	1	
SW7513		EVQ11407K	SWITCH	1	
SW7515-26		EVQ11407K	SWITCH	12	
SW7532,33		EVQ11407K	SWITCH	2	
			CRYSTAL OSCILLATORS		
X7501		VSX0140	CRYSTAL OSCILLATOR	1	
X7502		VSX0094	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VEK5788	IR RECEIVER UNIT	1	<!>
		VJF0934	FIP HOLDER	1	
		VJF0935	LED HOLDER	1	
	■	VEP00S58A	OPERATION C.B.A.		(NIA)
			DIODES		
D4351		LN28RPX2	DIODE	1	
			CONNECTORS		
PP4352		VJP3084A005	CONNECTOR (MALE)	1	
			RESISTORS		
R4354		ERJ8GCYJ561	M.RESISTOR CH 1/8W 560	1	
			SWITCHES		
SW4351		EVQ11407K	SWITCH	1	
			MISCELLANEOUS		
		VMX2030	LED SPACER	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEP07645M	TV DEMODULATOR C.B.A.		(NLA)<!>
			CAPACITORS		
C701		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C702		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C703		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C705		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C708		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C709		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C711		ECUM1H104ZFN	C.CAPACITOR 50V	1	
C717-20		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	4	
C721		ECEA1HKR27K	E.CAPACITOR 50V 0.27U	1	
C722		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C723		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C725		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C727		ECUM1H080DCN	C.CAPACITOR CH 50V 8OP	1	
C728		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C730		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C731		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C732		ECQV1H224JZ	P.CAPACITOR 50V 0.22U	1	
C734		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C735		ECUM1H070DCN	C.CAPACITOR CH 50V 7P	1	
C736		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C737		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C739		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C740		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C741		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C742		ECUM1H030CCN	C.CAPACITOR CH 50V 3P	1	
C743		ECUM1H270JSN	C.CAPACITOR CH 50V 27P	1	
C744		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C745		ECUM1H680JPN	C.CAPACITOR CH 50V 68P	1	
C746		ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
C748,49		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C760		ECQV1H473JZ	P.CAPACITOR 50V 0.047U	1	
C781		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C782		ECUM1H060DCN	C.CAPACITOR CH 50V 6P	1	
C787		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C797-99		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C7651		ECEA1CKN100	E.CAPACITOR 16V 10U	1	
C7653		ECQB1H392JH	P.CAPACITOR 50V 3900P	1	
C7654		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C7655,56		ECEA1HK010	E.CAPACITOR 50V 1U	2	
C7657		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7658		ECQP1562JZ	P.CAPACITOR 100V 5600P	1	
C7659		ECQB1H272JH	P.CAPACITOR 50V 2700P	1	
C7661		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7662		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C7663		ECQV1H823JZ	P.CAPACITOR 50V 0.082U	1	
C7664		ECQB1H273JH	P.CAPACITOR 50V 0.027U	1	
C7665,66		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7667		ECEA1HKA100	E.CAPACITOR 50V 10U	1	
C7670,71		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7673		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7675		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C7676,77		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7678		ECEA1CK220	E.CAPACITOR 16V 22U	1	
C7680		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C7681		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
			DIODES		
D710		MA3100L	DIODE	1	
D771		MA151WK	DIODE	1	
D772		1SS254	DIODE	1	
D773		MA151K	DIODE	1	
D7601		MA151A	DIODE	1	
D7602		MA3082M	DIODE	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			INTEGRATED CIRCUITS		
IC701		M51366SP	IC	1	
IC7651		AN5421N	IC	1	
IC7652		AN5043	IC	1	
IC7653		MN4066BS	IC	1	
			COILS		
L701		ELESP680KA	COIL 680UH	1	
L711		ELQTR22XB	COIL 0.22UH	1	
L714		VLQ0305J1R2	COIL 1.2UH	1	
L715		VLQ0213K680	COIL 68UH	1	
L716		ELESP560KA	COIL 56UH	1	
L717,18		ELESP680KA	COIL 68UH	2	
L719		VLQEL05F120K	COIL 12UH	1	
L720		ELESP680KA	COIL 68UH	1	
L781		ELESP680KA	COIL 68UH	1	
			CONNECTORS		
PS701		VJS3043B005W	CONNECTOR (FEMALE)	1	
PS702		VJS3043B004W	CONNECTOR (FEMALE)	1	
PS703		VJS3043B005W	CONNECTOR (FEMALE)	1	
PS704		VJS3043B004W	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q703		2SD601-S	TRANSISTOR	1	(S,T)
Q712		2SD638	TRANSISTOR	1	
Q713		2SD1328	TRANSISTOR	1	
Q771		2SD601-S	TRANSISTOR	1	(S,T)
Q772		2SD601-S	TRANSISTOR CHIP	1	(S,T)
			COMBINATION PARTS		
QR701,02		MRN1404	TRANSISTOR	2	
QR711,12		MRN1403	TRANSISTOR	2	
QR713,14		MRN1402	TRANSISTOR	2	
QR7601		MRN1404	TRANSISTOR	1	
			RESISTORS		
R716		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R717		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R718		ERJ6GEYJ754	M.RESISTOR CH 1/10W 750K	1	
R719,20		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	2	
R721		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R722		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R723		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R724		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R725		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R726		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R727		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R728		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R729,30		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	2	
R737		ERJ6GEYJ274	M.RESISTOR CH 1/10W 270K	1	
R738		ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	1	
R739		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R740		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R743		ERJ6GEYJ470	M.RESISTOR CH 1/10W 47	1	
R744		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R745		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R746		ERDS2TJ181	C.RESISTOR 1/4W 180	1	
R747		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R750		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R751		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R756		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R757		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R758		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R763		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R764		ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R772		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R773		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R774		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R781		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R782		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R792		ERDS2TJ120	C.RESISTOR 1/4W 12	1	
R795		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7651		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R7654		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7655		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R7656		ERJ6GEYJ151	M.RESISTOR CH 1/10W 150	1	
R7657		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7658		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R7659		ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R7661		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7662		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R7663		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7664		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7671,72		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	2	
R7673		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7674		ERJ6GEYJ124	M.RESISTOR CH 1/10W 120K	1	
R7675		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7676		ERG1SJ152	M.RESISTOR 1W 1.5K	1	
R7677		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R7678		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R7679		ERDS2TJ100	C.RESISTOR 1/4W 10	1	
R7680		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7681,82		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	2	
R7683		ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R7684		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R7691		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7692		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7694		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7695		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7696		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
			TRANSFORMERS		
T703		EIV5EC013A	TRANSFORMER	1	
T704		EIV5EC006A1	TRANSFORMER	1	
T711		EIS5EC004A	TRANSFORMER	1	
			VARIABLE RESISTORS		
VR701,02		EVMF6SA00B23	V.RESISTOR 2K	2	
VR741		EVNDXAA00B14	V.RESISTOR 10K	1	
VR751		EVNDXAA00B53	V.RESISTOR 5K	1	
VR7660		EVN38CA00B23	V.RESISTOR 2K	1	
			CRYSTAL OSCILLATORS		
X710		EFCH38MGP1	CRYSTAL OSCILLATOR	1	
X711		EFCS5R5MW5	FILTER	1	
X712		EFCS5R5MS5	FILTER	1	
X716,17		EFCA40R40M1	FILTER	2	
			MISCELLANEOUS		
		VMC0727	EARTH SPRING	1	
		VSC3242	SHIELD COVER (MAIN)	1	
		VSC3241	SHIELD COVER (TOP)	1	
		VSC2714	SHIELD COVER (BOTTOM)	1	
		ENV57895H3	TUNER	1	
	■	VEP01518D	POWER C.B.A.		(NLA)<!>
			CAPACITORS		
C1101		VCC0021	C.CAPACITOR	1	<!>
C1106		VCC0021	C.CAPACITOR	1	<!>
C1107		ECQU2A154MNB	P.CAPACITOR 250V 0.15U	1	<!>

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C1108		ECQU2A104MN	P.CAPACITOR 250V 0.01U	1	<!>
C1109		ECES2GG680	CAPACITOR	1	
C1110		ECQV1H124JZ	P.CAPACITOR 50V 0.12U	1	
C1111		ECQB1H153JF	P.CAPACITOR 50V 0.015U	1	
C1114		VCC0022	C.CAPACITOR 1000P	1	<!>
C1115		ECQE6473KF	P.CAPACITOR 50V	1	
C1116		VCK0106K221	CAPACITOR	1	
C1117		ECQB1H123JF	P.CAPACITOR 50V 0.012U	1	
C1118		ECEA1JFE470	E.CAPACITOR 63V 47U	1	
C1119		ECCD2H101J	C.CAPACITOR 500V 100P	1	
C1120,21		ECEA1DFZ681	E.CAPACITOR 20V 680U	2	
C1122		ECEA1VFE820	E.CAPACITOR 35V 82U	1	
C1123		ECEA1DFZ331	E.CAPACITOR 20V 330U	1	
C1124,25		ECEA1AFZ331X	E.CAPACITOR 10V 330U	2	
C1126		ECQB1H103JF	P.CAPACITOR 50V 0.01U	1	
C1127		ECKF1H102ZF	C.CAPACITOR 50V 1000P	1	
C1128		ECEA1CGE101	E.CAPACITOR 16V 100U	1	
C1129		ECQB1H223JF	P.CAPACITOR 50V 0.022U	1	
C1130		ECA1CGE101X	E.CAPACITOR	1	
C1131		ECCD2H101J	C.CAPACITOR 500V 100P	1	
C1133		ECKF1H102ZF	C.CAPACITOR 50V 1000P	1	
C1134-39		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	6	
			DIODES		
D1101		S1WBA60S	DIODE	1	<!>
D1102		1SS254	DIODE	1	
D1103		VSD0002	DIODE	1	<!>
D1104		AP01C	DIODE	1	
D1105		1SS254	DIODE	1	
D1106,07		MA178	DIODE	2	
D1108		MA4024-H	DIODE	1	
D1109		AU01Z	DIODE	1	
D1110		RL2Z	DIODE	1	
D1111		MA185	DIODE	1	
D1112,13		11EQS04	DIODE	2	
D1114,15		MA178	DIODE	2	
D1117		MA2200B	DIODE	1	
D1118		1SS254	DIODE	1	
			INTEGRATED CIRCUITS		
IC1101		UPC1093J	IC	1	
			COILS		
L1101		ELF18D221F	COIL 220UH	1	<!>
L1102-05		VLP0085	FILTER	4	
L1107		ELF18D290A	COIL 29UH	1	<!>
L1108,09		VLQ0410	COIL	2	
L1110		ELESE101KA	COIL 100UH	1	
			CONNECTORS		
P1101		VJS2625	CONNECTOR (FEMALE)	1	<!>
P1102		VJS3193B013A	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q1101		2SC4300	TRANSISTOR	1	<!>
Q1102		2SD1458	TRANSISTOR	1	
Q1103		PS2561L1-1WL	TRANSISTOR	1	
Q1105		2SD1991	TRANSISTOR	1	
Q1106		2SD2375	TRANSISTOR	1	
Q1108		2SD1458	TRANSISTOR	1	
Q1109		2SD1996	TRANSISTOR	1	
			RESISTORS		
R1101		ERC12AGM334	S.RESISTOR 1/2W 330K	1	<!>
R1102		ERDS1TJ154	C.RESISTOR 1/2W 150K	1	
R1103		ERG2SJ680	M.RESISTOR 2W 68	1	
R1104		ERX1SJR68	M.RESISTOR 1W 0.68	1	
R1105		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R1106		ERW1PK2R2	W.RESISTOR 1W	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R1107		ERG3SJ683	M.RESISTOR 3W 68K	1	
R1108		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R1109		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R1110		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R1111,12		EROS2CKG2701	M.RESISTOR 1/4W 2.7K	2	
R1113		EROS2CKG2702	M.RESISTOR 1/4W 27K	1	
R1114		ERDS1TJ472	C.RESISTOR 1/2W 4.7K	1	
R1115		ERDS2TJ820	C.RESISTOR 1/4W 82	1	
R1118		EROS2CKG3001	M.RESISTOR 1/4W 3K	1	
R1119		EROS2CKG2701	M.RESISTOR 1/4W 2.7K	1	
R1120		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R1121		ERDS1TJ154	C.RESISTOR 1/2W 150K	1	
R1122,23		ERDS2TJ474	C.RESISTOR 1/4W 470K	2	
R1124		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R1125		ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
			TRANSFORMERS		
T1101		VLT0688	TRANSFORMER	1	
			MISCELLANEOUS		
		VJF0318	FUSE HOLDER	2	<!>
		VMZ1184	CAPACITOR COVER (B)	3	<!>
	■	VEP00R11A	PHOTO Tr. (S) C.B.A.		(NLA)
			CAPACITORS		
C1501		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
			CONNECTORS		
P1507		VJS3049B004T	CONNECTOR (FEMALE)	1	
P1512		VJS3070T	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q1501		PN150NVS	TRANSISTOR	1	
			MISCELLANEOUS		
		VMD0645	HOLDER	1	
	■	---------	PHOTO Tr. (T) C.B.A.		(NLA)
			CAPACITORS		
C1502		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
			CONNECTORS		
P1503		VJS3049B004T	CONNECTOR (FEMALE)	1	
P1508		VJS2331	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q1502		PN150NVS	TRANSISTOR	1	
			RESISTORS		

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R1503		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
			MISCELLANEOUS		
		VMD0645	HOLDER	1	
	■	VXA4462	MECHANISM CONNECTION C.B.A.		(NLA)
			MISCELLANEOUS		
		VMB2020	EARTH SPRING	1	
		VMD0911	LED HOLDER	1	
		ON2170-RLF	PHOTO INTERUPTER	2	
		VJS3071T	CONNECTOR (FEMALE) 13P	1	
		VMA7829	SUPPORT PLATE (FRONT)	1	
		VMA8468	SUPPORT PLATE (REAR)	1	
		VMZ1366	PROTECTION SHEET	1	
		GL450	PHOTO DIODE	1	